

DUN'S REVIEW

APRIL · 1952

35¢

A REPLY TO

Manpower Problems



THOMAS ROY JONES

President, Daystrom, Incorporated

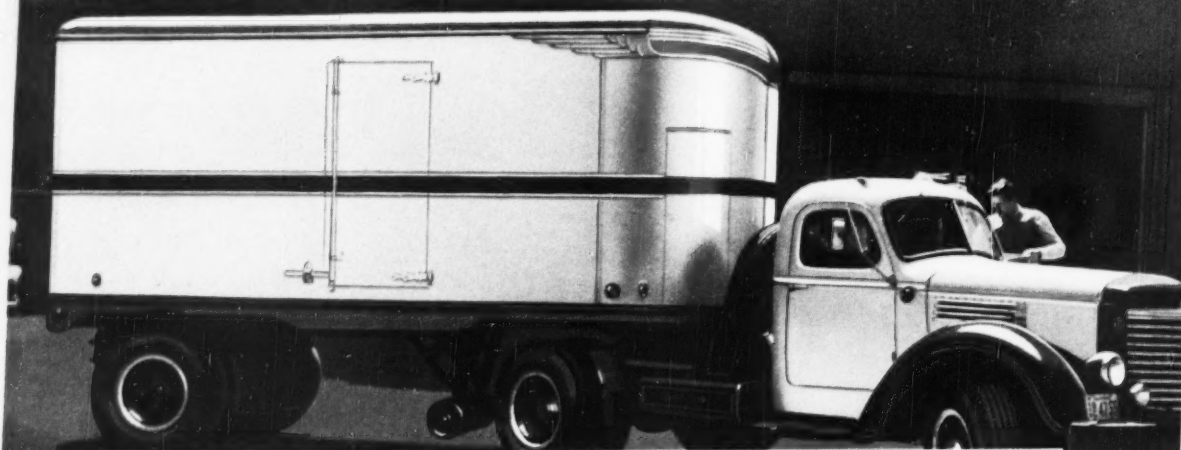
ALL INDUSTRIAL management is finding itself beset with abnormal conditions within its own business. There are shortages in materials and in some types of labor. We are faced with increased wages and increased material costs caused by restrictions, allocations, and the general lack of national economic policy.

If we are successful in securing contracts for defense production there come more unfamiliar problems—the wrench to an organization which comes of designing new types of products, probably the necessity of obtaining and training new personnel, the familiarizing an organization with unfamiliar government procedures.

Continued on page 11

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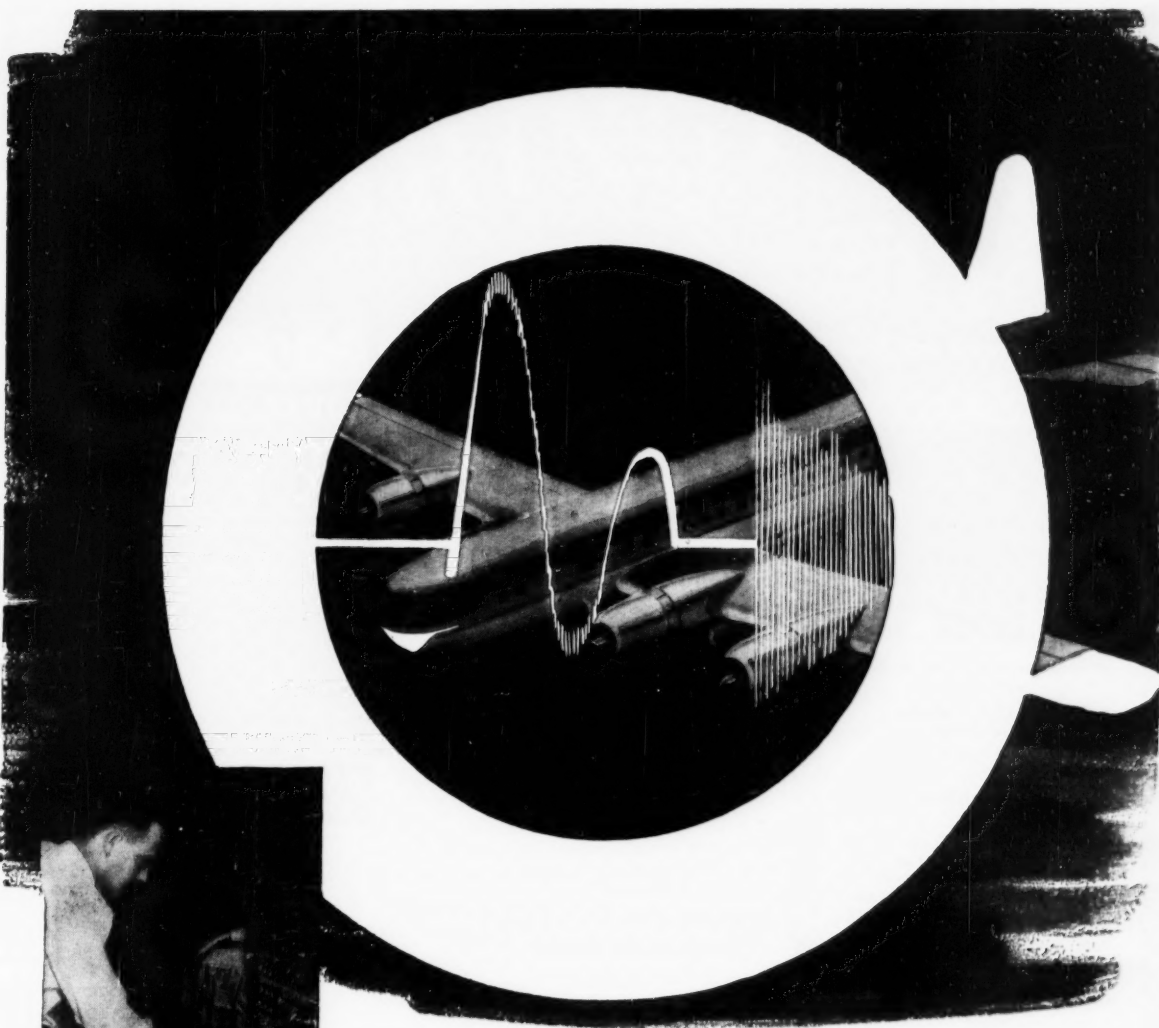
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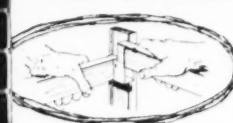
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Heard in WASHINGTON



Members of the Federal Reserve Staff avoid prophecy, but the Senate Banking and Currency Committee has goaded them into the expression of these views: Little change in business activity during the coming months Plant and equipment expenditures will decline only slightly Consumers will step up their buying Defense expenditures will continue indefinitely on a high plateau Man-hour productivity will continue to increase Inflation can be controlled by appropriate policies Reduction in inventory accumulation will offset expansion elsewhere Mortgage credit will decline The Government may have to borrow more than \$10 billion in the last half of the year.

The deficit will reach a new peak by the end of the calendar year. Before the Treasury can carry out its plans to borrow from savings it will have to revise savings bond conditions and make other bonds more attractive to large investors.

Apparently the administration has been persuaded that there is more political danger in rising prices than in rising interest rates. Whether this conversion will be lasting will be determined when the Treasury has to go into the market for a substantial amount of new funds. In line with the stiffening of rates on other securities, it is thought probable that savings bonds will be made more attractive.

This from William McChesney Martin, Federal Reserve Chairman: "The Government has a financing problem of great magnitude. Soft spots in the economy do not mean that further resurgence of inflation is past. We must carry the defense program without further inflation. The dollar is pivotal in the financial reconstruction of the free world. It is more important than the military might of the United States."

Mobilization officials feel they have developed a plan which can be carried out without inflation and without curtailment of ordinary consumption. This means that military spending will be slower than was contemplated when the budget was formulated. The plan assumes a

moderate curtailment of construction; no further increase in inventories; and some decline in capital outlays.

Controls officials would have done more about decontrol of various steel products had there been no strike threat. That uncertainty prevented the liberalizing of restrictions on use that otherwise would have been ordered. The industry now has the capacity to meet demand, both military and civilian, for most items. Heavy plate, structural steel, and the steel used by the oil industry will continue to be exceptions.

Sharing knowledge and skill with one's neighbors is not open to the criticisms usually aimed at monetary grants. Financial help usually has strings attached which frequently give ground for objections from both parties to the arrangement. Aid being extended under the Point Four program is in no sense charity. There is no loss of dignity in the acceptance of instruction which promotes self-reliance.

Success attending the program, now co-ordinated under the State Department's Institute of Inter-American Affairs, has impressed Congress. Proof of that is had in its willingness to double the appropriation for this work.

When this column reported that economists in Washington do not believe a return to the gold standard would restrict public spending, issue was taken in some quarters. The matter has been pursued further.

Government economists, uninfluenced by political considerations, agree that convertibility of currency into gold on demand is a limitation on Government spending. So long as Congress and the people are prepared to spend, gold conversion will not be restored. If it should be restored it would be abandoned.

Paul E. Euston

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Letters . . .

TO THE EDITOR

THOUGHT FOR FOOD

For the past several months we have observed a developing discrepancy between the Bureau of Labor Statistics, weekly index of wholesale food prices and the weekly wholesale food price index published by your company. As you undoubtedly know, the two series correlated reasonably closely during 1950 but began to move apart in December of 1950 and began to show decidedly divergent trends after mid-June of 1951.

We assume this difference must be attributable to the method of constructing the index. We understand that the DUN & BRADSTREET index is but a simple total of 31 commodity prices per pound but we have no information as to the commodities included in the total.

We would appreciate any information you can give us as to the reason for the discrepancy in these two measures of wholesale food prices.

R. Welborn
Swift and Company
Chicago, Ill.

DUN & BRADSTREET *wholesale food price index corresponds more closely to BLS daily spot commodity index for food-stuffs.*—Ed.

NO COVER CHARGE

If you should have an extra copy of the "Cover" page on your book for January 1952, we should appreciate you sending us one. We wanted this for framing.

David B. Jacobi, President
David Jacobi Supply Company
Wilmington, Del.

If it is possible to obtain a copy of the cover of DUN'S REVIEW for January, 1952, I shall appreciate it.

Christine Johnson
Senate Office Building, Committee
on Expenditures in the Executive
Departments
Washington, D. C.

RATIO RIPPLES

In this December, 1951 issue, you list 14 ratios for 36 manufacturing lines. We are manufacturers of commercial refrigeration for hotels and restaurants; and in reviewing the manufacturing lines, we are unable to determine if we are included in any particular one.

We would appreciate your notifying us if we are in a separate ratio set up for our industry, or if it has been included in one of the lines listed.

Frank Gill, Office Manager
Victory Metal Manufacturing Corp.
Philadelphia, Pa.

Due to difficulties in obtaining a representative sample, ratios for commercial refrigeration manufacturers have not been compiled.—Ed.

Would you have a copy or tear sheet of the 1950 figures on your "Fourteen Financial Ratios" data for the Department Store series that you could send me? I have been watching for this in the REVIEW but if it was printed, I must have overlooked it.

David C. McIntosh
The Halle Brothers Co.
Cleveland, Ohio

Ratios for Department Stores appeared in November 1951 issue.—Ed.

PREVIEW OF 1953

We wonder if we can count on your help—your co-operation.

For many years past, we have issued a 12-sheet wall calendar educational in scope, which we have distributed to our customers in the trade department stores, stationers, gift shops, jewelers, druggists and the many other merchants handling stationery and greeting cards—thousands of calendars being issued each year.

Our calendar for 1952, for instance features "Famous American Mountains," and the year before the calendar featured "Famous American Lakes and Rivers."...

For 1953 we are planning to feature "Famous American Lighthouses," a subject which we thought would be appropriate sequel to our calendar for this year which has popular appeal.

We are writing you wondering if you will be in a position to loan us for use on our calendar, the photograph of the lighthouse at "Minot's Ledge" off Cohasset, Massachusetts, which appeared on the frontpiece of the November 1950 DUN'S REVIEW. Perhaps you may have used other photographs of lighthouses in other issues, and if you'll be able to loan us the photographs, your courtesy will be much appreciated.

If you aren't in a position to supply the photographs, perhaps you might tell us where we can obtain them.

We might add that authorities the country over are helping us on the subject. For instance Rear Admiral A. C. Richmond, Acting Commandant, of the U. S. Coast Guard, Washington, D. C., is supplying us with the data and photographs of any of the lighthouses which

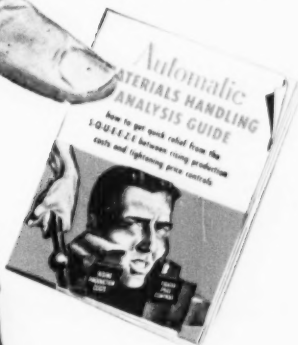
PUT YOUR FINGER ON MATERIAL HANDLING COSTS

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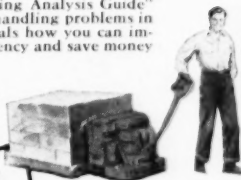
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Anything you can submit will be most welcome and will have consideration.

A. H. Sampson
Director of Sales Promotion
White and Wycoff Mfg. Co.
Holyoke, Mass.

We referred him to our suppliers.—Ed.

REFERENCE REQUEST

We are compiling for our own reference, a list of sources of information on the subject known as:

STATISTICAL QUALITY CONTROL

We will appreciate it if you will furnish us with the titles of any articles you may have had on that subject during 1950 and 1951 and the respective dates of issue.

G. P. Kurtz
G. M. Basford Company
Cleveland, Ohio

The May 1951 issue provided the answer.—Ed.

HELP WANTED

In connection with a survey that we are making, we need to know the number of new business incorporations in Florida by month, from January 1948 through October 1950. Possibly you would glean this information for us or would send us copies of the Statistical Review from March 1948 through October 1950.

David R. Holt
First Research Corp. of Florida
Miami, Fla.

We gleaned with glee.—Ed.

REGIONS IN REVIEW

Will you kindly send a copy of the *Dun's Review* Regional Trade Barometers for the United States and twenty-nine regions when available?

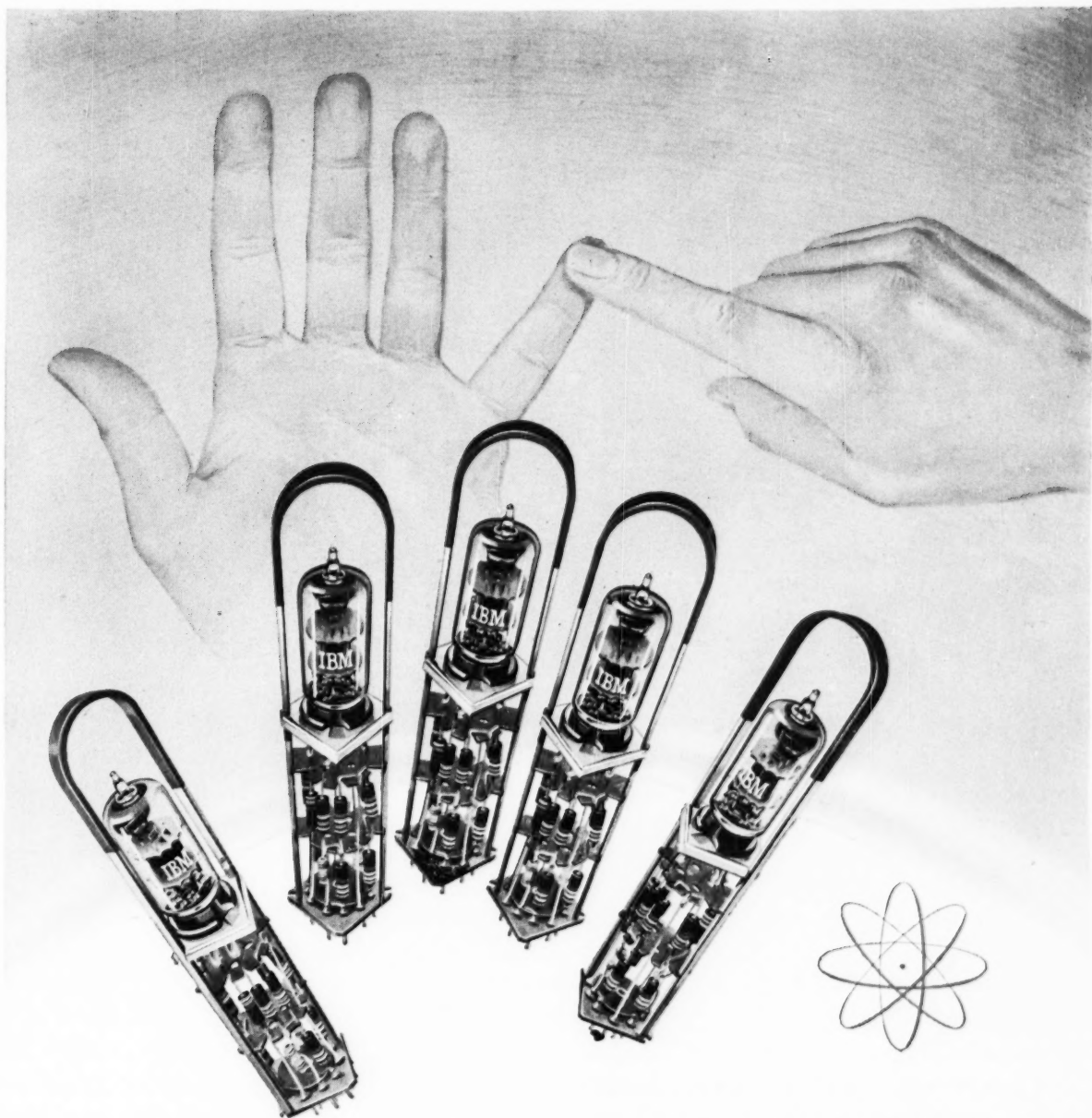
Fred J. Day
Yardley of London, Inc.
Union City, N. J.

Annual figures are available on request.—Ed.

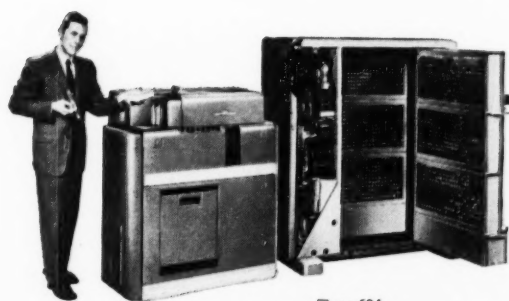
Please send us immediately all information you have available on the industrial South and Southwest. If this can be had in the shape of maps, charts, graphs, or the like, we would appreciate receiving these.

Thank you for your prompt co-operation.

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DEVANEY PHOTOGRAPH

*I*T IS NO PICNIC FOR MANAGEMENT TO PROVIDE FOR THE NEEDS OF EMPLOYEES AMID TO-DAY'S CONFUSING PROBLEMS AND CONFLICTING POLICIES. WHAT ARE THESE NEEDS AND HOW CAN THEY BEST BE MET? HERE IS ONE ANSWER TO THE QUESTIONS THAT HAVE ARISEN BETWEEN BUSINESS MAN AND WORKER DURING THIS EMERGENCY PERIOD.

A Reply to Manpower Problems

THOMAS ROY JONES
President, Daystrom, Incorporated

CONTINUED FROM COVER I

We are faced with a distortion of the normal channels of commerce and trade; with restrictions, controls, laws and bureaucratic rulings, inflation, and attempted governmental control through taxes as well as the drives of labor to pierce the Government's wage stabilization rulings almost as quickly as they are established.

In the field of politics, management finds itself confronted with the amazing resultants of an unrealistic administration having a highly developed sense of political strategy and a disturbingly meagre knowledge of the elements of business economics. There is a lack of clear-cut governmental policy on almost any subject of national and international import, and a disheartening lack of organization in the national defense program.

It's no secret what Daystrom is doing and this is one way they parade their policies into the open. It means a lot more to the worker to be able to see these policies in black and white than to have them passed through the grapevine and get them in whispers, rumors, and half-truths. Sour grapes grow on grapevines.

In the end, all of these conditions impose a very great problem upon management in the field of the best utilization of manpower. In certain skilled trades and professions there exists a real shortage of candidates. On the other hand, many companies have suffered severe material restrictions and allocations for their normal operations and are unable to offset this decline with defense manufacture, so that they are finding it necessary to lay off part of their normal working force.

Also the continued buying resistance of customers is causing inventory and sales problems which may have to be reflected in cutting the working force. All of this can result in considerable confusion and misunderstanding unless industrial management has established some pretty clear-cut and comprehensive employee and human relations policies to cover such periods.

The American industrial plant to-day has become more than just a place to work. It has become the leading



*We will
promote
from
within*

The personnel department will continue to place each employee in the opening of highest skill for which his training and abilities qualify him. We will continue to promote from within the Daystrom family of companies those who have the necessary qualifications to fill better positions. We will continue to have due regard for economy, as well as social rights of former employees.



*And train employees
for advancement*

In order to see fully the management available, we will train employees adequately for the jobs to which they are assigned and prepare them for advancement and the acceptance of increased responsibilities.

and critical factor in a great social, economic scheme. Its management must rise, not only to the demands of production, which in themselves are a tax on the imagination of most men, but to the need for added social responsibility and leadership brought about by the confused exigencies of the times.

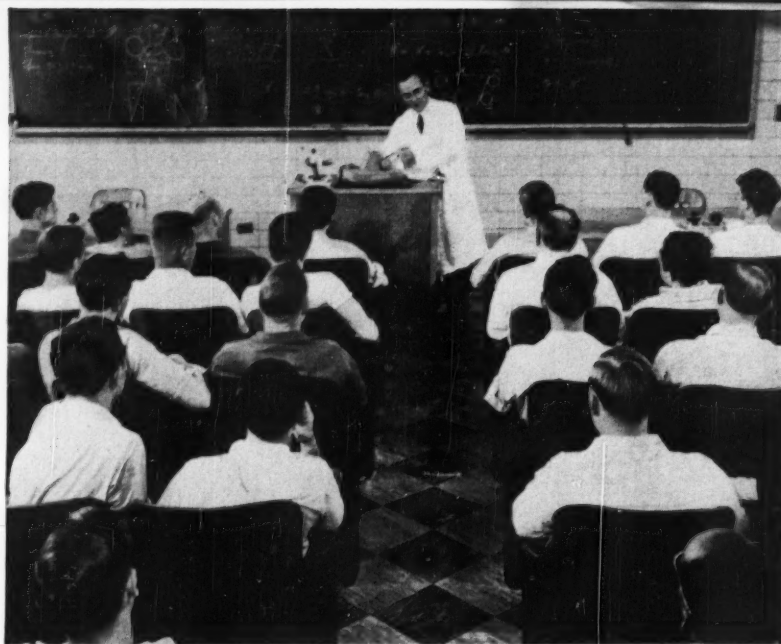
One of the most important responsibilities is that of keeping the channels of communications between management and the employee open and clear. It should be a prime objective of management to keep its employees informed of problems, policies, and plans that are of mutual interest to both. It is of the utmost importance that every effort be made to enlist the full support and co-operation of employees in any industrial problem.

It was with this in mind that my company recently published a small booklet which has attracted considerable attention, entitled *National Defense Program Manpower Policies of Daystrom, Incorporated*. It is our way of telling our employees where their management stands on employment and personnel policies in a period of unusual conditions.

The Time for Action

In times such as these, when rumors run rampant, when people are nervously stimulated by uneasiness and uncertainty, when advocates of foreign ideologies are insidiously attempting to gain control of men's minds, when we are faced with changing and possibly expanding operations, it seems imperative that management make known its thinking with regard to the employee's status. The solution of any problem which American business must face is in the final analysis dependent upon people. And their reactions and co-operation will decide whether we shall continue the industrial supremacy for which we are the envy of the entire world.

It hardly seems necessary to warn that no organization can suddenly set forth a new program of manpower policies for this emergency period and expect them to function as they should. Rather, such policies should come as the natural outgrowth of well-established, well-working human relations and personnel practises which are con-



DEVANEY PHOTOGRAPH

"Back to school" is a welcome phrase when the worker knows that it is part of a plan to train him for advancement. Of course the classroom and the teacher are important elements, but of even more importance for an enthusiastic response from the workers is their understanding of the purpose behind the program. Misunderstanding is a plague that can be stopped from spreading by an injection of fact.

tinuously communicated to supervisors and employees.

Management has come a long way in the last ten years in the area of employee and human relations. Of course, there are still some die-hards, but we learned a lot from our experiences with manpower problems in World War II and the reams of words that have been written and spoken in a plea for enlightened practises in this area have not gone unheeded.

Any industrial management which has established definite principles and policies of good employee relations should be able without too much difficulty to adapt those policies to meet the peculiar manpower problems of a defense period. These policies should be made known not only to employees, but to the public, suppliers, customers, stockholders, and the government.

In the Daystrom, Incorporated, booklet our purpose is stated in the opening paragraph—"In a national defense emergency every citizen has a responsibility to work earnestly for the furtherance of the nation's cause. As an industrial citizen, our company fully recognizes this responsibility. The manpower policies discussed in this booklet are designed to help us meet our special obligations during these times."

Our policies stem from a long-range

program, summarized in two printed statements which are used extensively in communications to employees and which are displayed in strategic points throughout our plants and offices. These two statements are known as "Our Creed" and "Our Objectives."

Nine Important Aims

The Creed contains the following nine points: 1. To pay fair wages. 2. To maintain reasonable hours of work. 3. To provide safe and healthful working conditions. 4. To give all employees equal opportunities for advancement. 5. To guarantee all employees the right to confer without prejudice with management on matters concerning their own or the company's interests. 6. To make every effort to provide steady employment. 7. To provide greater security for employees and their families. 8. To encourage friendly and co-operative relations among all groups within the company. 9. To give all applicants a fair and equal chance to qualify as employees.

This Creed has served well. It has been a sign post to employees and management alike. To say that there may not have been mistakes in its administration would overlook the fallacies of human nature. But with the Creed as a constant reminder, many mistakes

have been avoided which might otherwise have come to pass.

"Our Objectives" contain the following six points: 1. To provide useful and needed products of high quality at fair prices. 2. To increase our productivity and thereby improve the earnings and job security of our employees. 3. To earn a return on the stockholders' investment at least equal to that of companies in industries where the risk is comparable. 4. To maintain relationships with our suppliers that will help them, as well as ourselves to grow and prosper. 5. To stimulate scientific endeavor and utilize the methods of research to improve our present products and create new ones. 6. To be good neighbors in our local communities and to be good citizens through helping to serve the nation's best interests.

Now let us take a look at the policies we felt should be stressed in this defense period. First, "Management recognizes its continuing responsibility for fair and considerate personnel policies, especially as to selection, placement, advancement, and compensation. We will make every effort to stabilize employment and avoid unnecessary turnover. This responsibility includes attention to the special problems of adjustment after the national emergency ends."

Do I need point out that such a policy requires careful and long-range production planning, purchasing, and control in addition to the proper selection, training, and assimilation of the new employees into any organization? Furthermore our actions now must not be so short sighted as to leave us with multitudinous problems of how to adjust our emergency organization to normal employment levels. Without continued thought as to post-emergency requirements, it is easy to acquire more personnel than we may actually need at any given time on the basis that we "might" need them later.

A Policy for Hiring

This leads us into our second policy, "In hiring new employees we will co-operate fully with programs set up by the Government to aid the effective use of manpower. We will comply with regulations affecting the movement of personnel, and will co-operate with other organizations in the community to avert the pirating of employees. We will employ women and minors to supplement our normal work force where necessary and conform to all legal regulations governing their employment."

Our third policy is highly important to the morale of any organization whether in a normal period or a pe-

riod of defense—"The personnel department will continue to place each employee in the opening of highest skill for which his training and abilities qualify him. We will continue to promote from within the Daystrom family of companies those who have the necessary qualification to fill better positions. We will continue to have due regard for seniority, as well as recall rights of former employees."

Over a year ago our Division of Human Relations, which is responsible for formulating and guiding the broad employee and personnel policies under which our subsidiaries operate, sent to all executive, administrative, and supervisory personnel a questionnaire. It asked them to indicate all past education, training, and experiences in various areas of industrial and business operation such as accounting, personnel, sales, engineering, and so forth. The results of this questionnaire were then correlated and recorded on McBee System Cards so that we have readily available an inventory of ability and training already within the company. Whenever a vacancy occurs in an executive or supervisory position, these records are reviewed for possible candidates. Such records also help in placing employees in another position within the company, should it become necessary to close any part or function of the organization in the event of a total defense period.

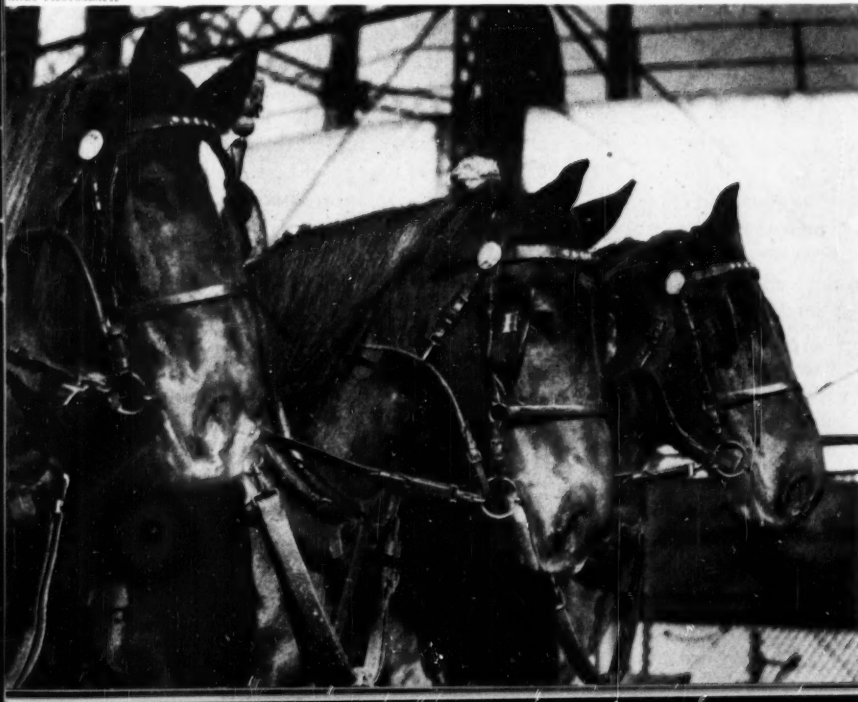
Our fourth policy becomes especially important at any time we may have to operate with a restricted labor market and rigid production schedules such as are required by our military agencies. That policy is "In order to use fully the manpower available we will train employees adequately for the jobs to which they are assigned and prepare them for advancement and the assumption of increased responsibilities."

Five: "We will continue to pay wages and salaries that are fair, that are consistent with community standards for similar work, that conform to government controls, and that are proportionate to the contribution of the individual. This policy shall continue to apply equally to all men and women employees."

There is no question that present
Continued on page 106

The old-time work horses operated well in teams when all they had to do was move together in one direction. But customs and methods change. The work horse is out-of-date and the blinders have become outmoded. Teamwork among employees to-day means working in many directions with the eyes open to the over-all results. Explanations and facts have replaced the reins and the whip.

ANEX PHOTOGRAPH



New Frontiers for PIONEERS

JOHN O. AMSTUZ

Vice-President, Behr-Manning Corporation

A 13-COUNTY AREA IN NORTHEASTERN NEW YORK STATE IS THE SCENE OF A NEW KIND OF BUSINESS CO-OPERATION. MANY OF THE DEFENSE PROBLEMS, ESPECIALLY THOSE AFFECTING SMALL BUSINESS, ARE BEING SOLVED IN A NEW BUT WORKABLE WAY. HERE IS HOW IT IS DONE.



THE OUTBREAK of the Korean War came with great suddenness and it brought the United States dangerously close to World War III, with the nation unprepared to handle a major conflict.

It brought to the attention of the people of our country the necessity for preparedness for the common defense as one of our nation's strongest guaranties of security.

It made us again realize that it was impossible for a nation to prepare for war after a conflict became imminent. It became clear to all of us that a conflict in the Atomic Age would differ radically from World Wars I and II. An enemy attack would probably be instantaneous—a sort of combination of Pearl Harbor and Hiroshima.

The outbreak of the Korean War left no doubt in anybody's mind that it was high time for the United States of America to rearm. It became clear that military preparedness was necessary to keep America strong—ashore, afloat, and aloft.

Our defense program presents many problems experienced in World War

II. Industrial America is again called upon to produce fighting equipment of intricate and unusual design for our Army, Navy, and Air Force. This results in a major change in the make-up and in the use of our industrial production capacity.

Whenever such a change occurs, things seem to be thrown out of gear during the transition period from normal to the defense output. Small shops are adversely affected during this period and many of them seem to be unable to cope with the situation. Many seem to have lost their bearings and are in need of help to carry on and find new work for their shops and for their employees.

Small shops are a very important component of our great industrial community and to see them idle or helpless for too long is a great loss to the output of industry. It is also damaging to the morale of everyone connected with small business. Over half of all employees engaged in manufacturing establishments work in shops each employing less than 500 people.

The first phase of a mobilization

program for defense finds the small shop badly in need of technical assistance and expert advice in financing, tooling up, contracting, expediting, and so on. Unfortunately, just when the need for help is greatest, it is most difficult to obtain it. A sudden introduction of a great defense program dislocates the normal functioning of our industry.

Industrial establishments large and small are confronted with essentially the same tasks. It is only natural that the problems facing the large concern are generally more important than those of the small shop. Large concerns become prime contractors, small shops are doing best as subcontractors. In a defense program, large concerns come first and we find the small shop at the far end of priority. Large concerns need a large part of the available expert manpower.

As long as they are swamped with their own problems they are unable to look out for the small shops. What is the small shop going to do and where can the small enterprise get help? In spite of all the difficulties, we believe

that it is possible to help substantially in the solving of the problems.

Under the sponsorship of the American Ordnance Association, a Committee of Industrial Preparedness was formed to assist industrial concerns in the district of the Capital Cities Post to carry out the industrial mobilization program. The territory of the Capital Cities Post is Up-State New York, and the counties belonging to this Post are: Albany, Rensselaer, Schoharie, Schenectady, Montgomery, Fulton, Saratoga, Washington, Warren, Hamilton, Essex, Franklin, and Clinton.

The Committee of Industrial Preparedness is very much interested that all available facilities are most effectively used for the production of armaments and military supplies. The Committee is concerned about one of the most vital factors in defense work, the small shop, so important on account of its flexibility. There are a good many small shops operated by men of imagination and initiative and know-how, seldom found outside the small shop.

It is in the small shop where men who are born mechanics and excellent craftsmen make a living. These men can often do things with simple machines and ingenious methods that well equipped shops with the very best equipment are not able to do. A little assistance to the men running the small

shops, in engineering, contract interpretation, specification, in pooling with other small enterprises, makes these small operators a formidable factor in the defense program.

The Initial Move

Realizing these facts, the Committee of Industrial Preparedness of the American Ordnance Association set out to co-ordinate the potential facilities of small enterprises. The first step was to take an inventory of all industrial concerns and small shops in our district, looking out especially for talent behind the machine rather than for the machine itself. In other words, the human factor was emphasized, realizing that it is very often relatively simple to tool up and equip a man who knows his business.

In order to do the job confronting the Committee, several sub-committees were formed: (1) A Facilities Committee; (2) A Financing Committee; (3) A Contract Committee; (4) A Committee on Job Processing; (5) A Committee on Plant Protection.

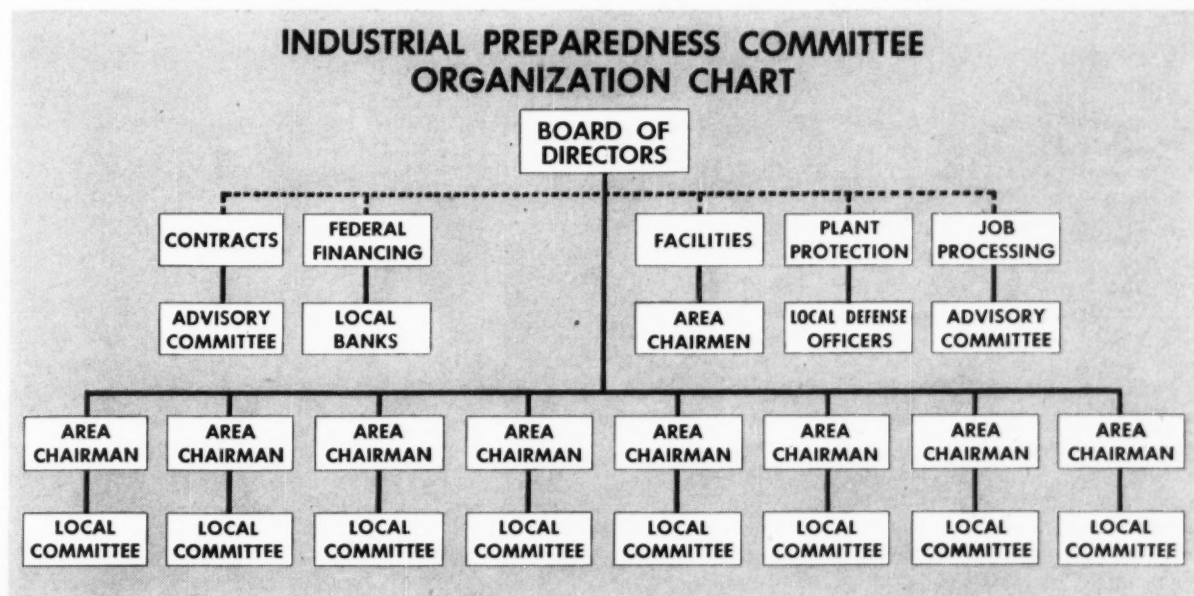
The Facilities Committee analyzed 250 industrial concerns located in the Capital Cities Post District. We found that we had many concerns that could qualify as prime contractors, but the

majority were best suited to do subcontracting. The shops indicated by the survey to qualify for subcontracting were classified into metal shops, non-metal shops, textile converting establishments and textile processing plants, food producers, construction material firms, and shops with non-essential defense program facilities but with possible surplus manpower. The Committee also listed all the consulting engineers and technical experts in the district who could be of help if needed.

The Facilities Committee listed the normal products of each concern and the product made in World War II. It was much concerned to find what bottlenecks were encountered during the last war. The Committee was interested in information concerning the financial rating, real estate, floor space, plant security, transportation facilities, power and fuel requirements, employment, equipment, and other vital data. It was especially interested in information about company officials and particularly in a good contact man in each concern. It was interested in knowing something about the company's past performance and its reputation.

An extremely important committee
Continued on page 89

The pattern of organization that has brought new work, new life, and new hope to many small businesses in a section of New York State can easily be duplicated in other regions and areas throughout the United States.





"Moderation is the silken string running through the pearl chain of all virtues," Joseph Hall, Bishop of Norwich.—HUNANEY PHOTOGRAPH

Executive Health for Company Wealth

ROBERT C. PAGE, M.D.

*General Medical Director
Standard Oil Company (New Jersey)*

AMONG THE MOST VALUED ASSETS OF MANY COMPANIES TO-DAY ARE THE EXECUTIVES. YET FEW FIRMS TAKE AN ACTIVE INTEREST IN PROTECTING AND FOSTERING THE SOUND MENTAL AND PHYSICAL HEALTH AN EXECUTIVE NEEDS. WHILE ULCERS, HEART DISEASE, AND HYPERTENSION ARE COMMON IN MANAGERIAL CIRCLES, THEY NEED NOT BE. HERE'S HOW TO OBTAIN AN EXECUTIVE'S OPTIMUM PERFORMANCE, WITH A MINIMUM OF WEAR-AND-TEAR.

THE MODERN concept of an industrial medical department implies that it is a service unit primarily serving all employees. But in recent years—due to the nation's tremendous industrial expansions—demand has increased sharply by many concerns for medical examination of executives.

There are many reasons for this cogent interest. It has been recorded by competent authority that during this present five-year period, American business will experience the greatest turnover of executive personnel in the history of free and competitive enterprise. There is a demand for engineers, chemists, production men, sales managers, marketing, advertising executives, treasurers, and comptrollers. This is all evidenced by the daily display of advertisements appearing in all major newspapers.

Employed individuals are taking advantage of this open market and are endeavoring to better themselves by making a change as a means of increasing their annual income. Managements cognizant of health as applied to executive development are scrutinizing those who wish to transfer in terms of their actual physical and mental limitations as well as in terms of

their recorded work accomplishments.

The type of background desired for most responsible positions is found in individuals over 40. The average older man, unless he is conscious of and has worked well within his own physical and mental limitations, may prove a costly addition to any organization. This, in addition to his normal sickness and absenteeism potential, must be interpreted in terms of approaching pension age and consequent necessity of training a replacement.

The increased size of the average business as a result of general expansion has strained the physical and mental capacities of many executives. During the war years, many men were forced to take more responsibility at an earlier age than ever before. Consequently, there are many young executives between the ages of 30 and 40 who are showing the medical effects of the stresses and strains resulting from

over-taxation or lack of personal understanding of their own physical and mental capacities.

Enlightened managements are searching for the key to proper selection of executives of the future. They realize that an executive who passes out of the picture as a result of a coronary at the age of 35 is an irreplaceable loss to the corporation.

It is becoming more and more evident that the individual's will and personal wishes must be considered in any assignment requiring additional perseverance. His personal likes and habits, the caliber of his home life and his outside activities must also be carefully weighed.

A constant problem in an executive health program is the difficulty in influencing executives to improve their attitudes and activities so as to safeguard their health. The routine performance of given duties over a prolonged period so establishes habits of thinking and acting that it is difficult and often distasteful to change them. The individual either convinces himself that such changes are unnecessary or puts them off. An executive of this type is a poor risk for promotion or transfer. He is an excellent candidate for a physical or mental breakdown.

It happens constantly that an execu-

tive is flooded with inner conflicts each time he faces the questions of delegating responsibility and authority, of encouraging and helping an understudy for his own job. He rationalizes himself into not doing the things he has agreed he should do. He is afraid that by doing them he might risk losing authority and in the long run lose more than he can gain. This type of executive is in for trouble from a strictly medical point of view.

Your Health Budget

It is imperative for every employee to know what his health is and to learn to live within the budget nature has given him. I am convinced the issue can never be dodged. Meeting it head-on—and the earlier, the better—is the only solution.

The individual who has physical limitations, but fails to live within them is not executive material. It is my conviction that if management would scrutinize the working efficiency and potentialities of an individual with the same thoroughness with which a properly trained doctor performs the periodic

medical inventory, there would be fewer executive losses in business today. Almost invariably, when a doctor detects a lack of interest in personal health maintenance, management can detect flaws in the employee's work.

A short time ago an employee passed through my office who, through circumstances, had been in a menial position for years. He disliked it immensely and was slowly developing all kinds of functional illness. In all probability he would have been a normal individual had he followed his original urge to go back to the farming he had enjoyed as a youth. He was encouraged to give further consideration to this wish.

In all likelihood, the company as well as the man would be better off in the long run if he did follow this basic bent. But then there are other cases where both the employee and the company would be better served by the physician's efforts to keep the employee at his job. The two categories can be separated only by the physician and his good judgment.

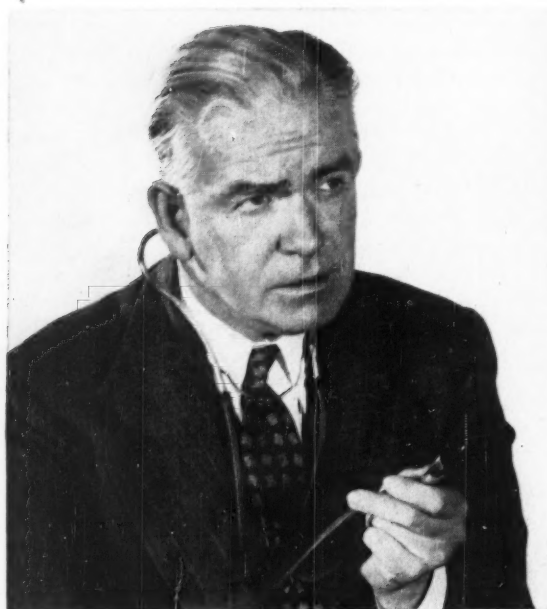
Each man, like a piece of machinery,

Just as the complexities of living in a metropolis contrast sharply with the simplicity of rural life, the inner drives and capabilities that make an executive may subject him to greater tensions than are encountered by those with simpler ambitions. But tensions can be materially reduced when the inner drives are understood and the capabilities properly evaluated. The trained physician can frequently prescribe for the mental and physical well-being so necessary for real success and satisfaction.

DUVANEY PHOTOGRAPH



Don't rely on "an apple a day" if you're over 40; see your doctor and take his advice. Heart attacks and strokes take a large toll of executives each year. Good health habits increase in importance with each advance in age, particularly in times like these when ever greater demands are being made on administrative talent.



DEVANEY PHOTOGRAPH

shows the effects of the stresses and strains he has weathered. Each "wears" at what is essentially an individual rate. Important factors are the stresses undergone, previous diseases encountered, and the quality of the individual's own tissues, especially his circulatory system.

It is obvious that no two individuals will react in the same way to the same set of circumstances. This is where inherited tendencies, compensating factors, temperaments, and native intelligence play their part. The whole problem of job placement, the relation of man to his working environment is daily assuming an increasingly important rôle in organizational affairs.

The understanding doctor, if the knowledge he possesses is correctly applied and understood, is of inestimable value to employee and employer alike. This is dependent upon the complete co-operation of the individual who recognizes the problem and an understanding employer. The prescription involves the provision of a compatible working environment.

As an imaginary example, compare the situations of a highly trained executive lost in a jungle and a robust savage placed on a Board of Directors. The executive in his proper surroundings is efficient, reasonably happy and healthy. In the jungle, if he has to depend for survival upon his physical strength, speed on his feet, and endurance, he

might well become inadequate and diseased, depending upon the definition of these words. If there were native doctors in the jungle who were enthusiastic statisticians and nosologists, they would undoubtedly consider his cardiac reserve or vital capacity to be exceedingly defective.

If the savage on the Board of Directors had to depend on an ability to make decisions in an industry of which he had no knowledge, he might be regarded as a case of constitutional inadequacy. If he could fool his fellow board members for a time, he would probably end up sooner or later with a peptic ulcer or high blood pressure and be given antacids or sedatives by an unsuspecting doctor.

There are a great many analogous situations in real life, less apparent, but amounting to the same thing as the misplaced savage and executive:—the wrong man for the job.

A constructive health program can effectively bridge the gap between the executive of to-day and the potential executive of to-morrow if there is a mutual understanding and appreciation of the problem. The doctor in industry plays the neutral rôle, his interest in the employer and the employee being equal.

From both the professional and industrial standpoints, the problem of establishing an efficient executive health program is two-fold. Relatively few

practising physicians or private clinics are imbued with the art of constructive medicine or attuned to the needs of industry. On the other hand, the average industry has not been schooled in the medical aspects of human relations nor does it have the assistance of competent professional personnel.

Purposeful Programs

As stated previously, the primary purposes of all industrial health programs are: (1) To anticipate and prevent disease—to detect potential illnesses and maladjustments at a time when something positive, constructive, and curative can be done about them at a cost in keeping with the employee's ability to pay; and (2) to assist all employees in maintaining a normal health curve.

Teamwork between management and all departments devoted to the ever-expanding field of human relations is necessary to success. The function of the physician is no longer confined to the detection of physical defects. In addition, he now evaluates the employee's entire personality.

Among the physician's new responsibilities are the employee's traits; his reactions to other persons; his resistance to stress and strain, and his particular emotional makeup and pattern. This combination covers his entire physical, mental, and social state.

To be most effective, the medical department of an industrial organization must be largely independent. The physician in charge must report to top management where he is received as a consultant on the rapidly growing medical phase of human relations. He must report to someone in authority whose respect he has and who appreciates the rôle of the doctor in company affairs.

With such liaison, doctors of the highest order are attracted to posts in industry. It affords them scope for action in the most logical and practical field of medicine—the opportunity to know and study individuals in terms of total environment.

The first contact with the potential executive of to-morrow is when the pre-placement examination is performed. When this is done with enthusiasm and precision, the applicant will com-

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PHOTOGRAPH FROM NATIONAL FILM BOARD OF CANADA

Fortunes are easier to find! Well armed with the tools of modern science, to-day's prospector takes fewer chances for greater gains than his counterpart a generation or two ago. Encouraged by their Government, our Canadian neighbors are searching their land for treasure—and finding it.

OPPORTUNITIES *Unlimited* NORTH OF THE BORDER

C. M. SHORT

*C*ANADA is undergoing an economic transformation which in a quite short space of time will broaden and diversify her productivity far above its present high level. This is not the first great transformation of its kind in Canada—there was sweeping immigration and land settlement early in the present century which turned a sea of western prairie grass into one of the world's largest and best grain belts.

Later, there was mineral development that made this country one of the major sources of non-ferrous base metals. That, coupled with metallurgical and industrial expansion, transformed Canada into one of the leading manufacturing countries, with about half of her total national production in finished and semi-finished products.

But the present program is much different from anything in the past. It is of greater scope, for it stretches almost straight across the country, tak-

ing in territories regarded not so long ago as economic wildernesses, if not altogether inaccessible, so remote from established transportation routes and so climatically forbidding as seemingly to prohibit almost anything but primitive activities.

So the present expansion is not only of vast but, also, of rather heroic proportions. Moreover, it includes the development of resources, such as high-grade iron and petroleum, in which Canada has hitherto been deficient, and of some of which the United States and Europe are running almost perilously short. The results in production from the newly-found resources will not only provide Canada with greater supplies of valuable industrial materials, but also make available to other nations, particularly the United States, additional strategic materials they need to carry through their defense programs, as well as to maintain and improve

*F*AST RESOURCES ARE WAITING FOR MAN'S USE IN MANY AREAS OF THE WORLD, BUT THOSE TO BE DEVELOPED IN CANADA ARE OF PARTICULAR STRATEGIC, ECONOMIC, AND POLITICAL IMPORTANCE TO US. NEW MARKETS, NEW FIELDS FOR INVESTMENT, AND NEW SOURCES OF MATERIALS; NEW WAYS OF LIFE WHEN TWO STRONG NEIGHBORS CO-OPERATE.

their own civilian standards of living.

This Canadian program of opening up new sources of materials will involve total estimated expenditures of about \$2.5 billion by the year 1955. Nearly \$1.5 billion will be required for the development of such basic ma-

terials as oil, iron, nickel, copper, lead, zinc, tungsten, cobalt, and bulk chemicals. Another \$1 billion will be necessary for hydro-electric power to generate the new mineral and associated industrial facilities.

It should be noted that all of these major projects are "firm" that is, definitely planned and, indeed, advanced beyond the paper stage. Work has actually begun on all of them though, of course, in various phases. But some of it is well on toward completion. Furthermore, most of these projects are being developed by private enterprise, with that system's own money, much of it American capital.

But all of the projects have the official blessing and encouragement of the Dominion Government—in one way by giving high priority to construction materials, such as steel and, in another manner, by income tax concessions and consideration for depreciation, if this is felt necessary to encourage expansion.

Income tax concessions provide for a three-year tax free period for mining companies after they commence operations on a commercial scale. Exploration, prospecting, and development expenses incurred by such companies and by oil corporations are also deductible until the relative projects come into commercial production. Moreover, a generous allowance for depreciation is deductible in computing both corporation and personal income taxes.

Most of these projects should be considered as soundly based even under the most peaceful and happy international conditions that could be desired. But there are some based on the present world political tensions.

Altogether, it is possible, with pres-

THE DEVELOPMENT OF STRATEGIC RESOURCES IN CANADA
TABLE I—INVESTMENT IN NEW PLANT AND EQUIPMENT

SELECTED INDUSTRIES	1950 Actual	1951 Preliminary	New Projects for Completion Within 4 Years
(Millions of Canadian Dollars)			
ALUMINUM SMELTING	\$ 3.4	\$ 18.2	\$ 233
ALL OTHER NON-FERROUS METAL SMELTING, REFINING, PROCESSING	19.2	5.0	150
IRON ORE MINING	5.7	23.8	226
PRIMARY IRON AND STEEL	15.7	66.9	88
PETROLEUM AND NATURAL GAS: DEVELOPMENT	62.4	70.9	300
TRANSMISSION AND REFINING	21.5	37.7	213
CHEMICAL PRODUCTS, INCLUDING PETRO-CHEMICAL PROJECTS	32.8	64.3	127
TOTAL	\$160.7	\$286.8	\$1,337
HYDRO-ELECTRIC POWER	\$344.5	\$403.8	\$1,200

TABLE II—TOTAL PRODUCTION CAPACITY, 1950-1955

SELECTED MINERALS	Actual Output 1950	Estimated Capacity 1950	Estimated Capacity 1955	% Increase Capacity 1950-1955
(Thousands of Barrels a Day)				
CRUDE PETROLEUM	80	80	250	210
(Thousands of Short Tons)				
PRIMARY ALUMINUM	395	415	603	45
IRON ORE	3,617	3,617	19,000	430
COPPER, ALL FORMS	262	272	300	10
LEAD, ALL FORMS	170	190	205	8
ZINC, ALL FORMS	311	320	406	27
NICKEL, ALL FORMS	123	137	155	13
ILMENITE, TITANIUM	100	100	550	450
PRIMARY STEEL INGOT	3,300	3,700	4,400	21

ent prices and the prospect of continuing great demands for materials to bring into production certain important sources of urgently needed supplies that might otherwise be left undeveloped.

It should not be assumed that the full period between now and 1955 will be required for the completion of all these projects or, indeed, that they will all end three years hence. As already

mentioned, all of these projects are in hand and the emergencies of the free world's rearmament program are hastening the development of the new sources of vital materials.

In fact, new facilities were brought into operation last year and, partly as a result, the total production of minerals in Canada had a record annual value of nearly \$1.25 billion. There

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Civilization is working wonders in the wilderness. The rugged jeep on the narrow dirt road seems far removed from shiny cars and modern highways—yet there is a closer connection than appears at first glance. For the exploration of the Canadian wasteland has yielded rich deposits of iron, oil, and minerals: new industries are springing up on what looked like barren hillsides. Shiny cars and modern highways are coming to the wastelands—to-morrow.

PHOTOGRAPH FROM NATIONAL FILM BOARD OF CANADA





Hotel on Wheels

RONALD SCHILLER



PICTURE, if you can, a stupendous hotel with 128,000 beds and some 400 assorted lounges, bars, and restaurants; consider that all the rooms are on wheels and continually rolling all over North America from Hudson Bay to Mexico City; realize that a bed in Chicago this evening must be in Denver, Toronto, New Orleans, or New York to-morrow morning with someone in it—if any money is to be made. Then maybe you will have some idea of the complexity of the world's largest, most fascinating hotel business, the Pullman Company.



Statistics of Pullman operations approach the realm of fantasy. It takes 24 people in the company's headquarters in Chicago just to keep track of its 6,382 railway cars. They once lost a sleeper in New York's cavernous Grand Central Station, found it eleven weeks later in a freight yard at Fort Worth, Tex., nearly 2,000 miles away. They still don't know how it got there.

On an average night 43,000 people roll around the country in their sleep, in Pullmans. To put them all to bed, watered and washed, requires 9 million pieces of linen, 8 million cakes of soap and 78 million paper cups per year.

On arising many passengers take some of the linen with them. This,

*O*PERATING IN A LOOKING GLASS WORLD WHERE EVERYTHING IS ON THE MOVE, PULLMAN MANAGES TO TURN NECESSITIES INTO LUXURIES. IT'S A WORLD WHERE THINGS REALLY GET DONE WHEN THEY ARE LEFT FOR "GEORGE" TO DO AND WHERE BUSINESS AND PLEASURE READILY MIX.

the company believes, is due to a curious tradition that appropriating Pullman linen somehow is not stealing. Not long ago a lady returned a badly frayed set of Pullman towels with a note explaining that she had received them as a wedding gift some years before and she understood the company would replace them as they wore out.

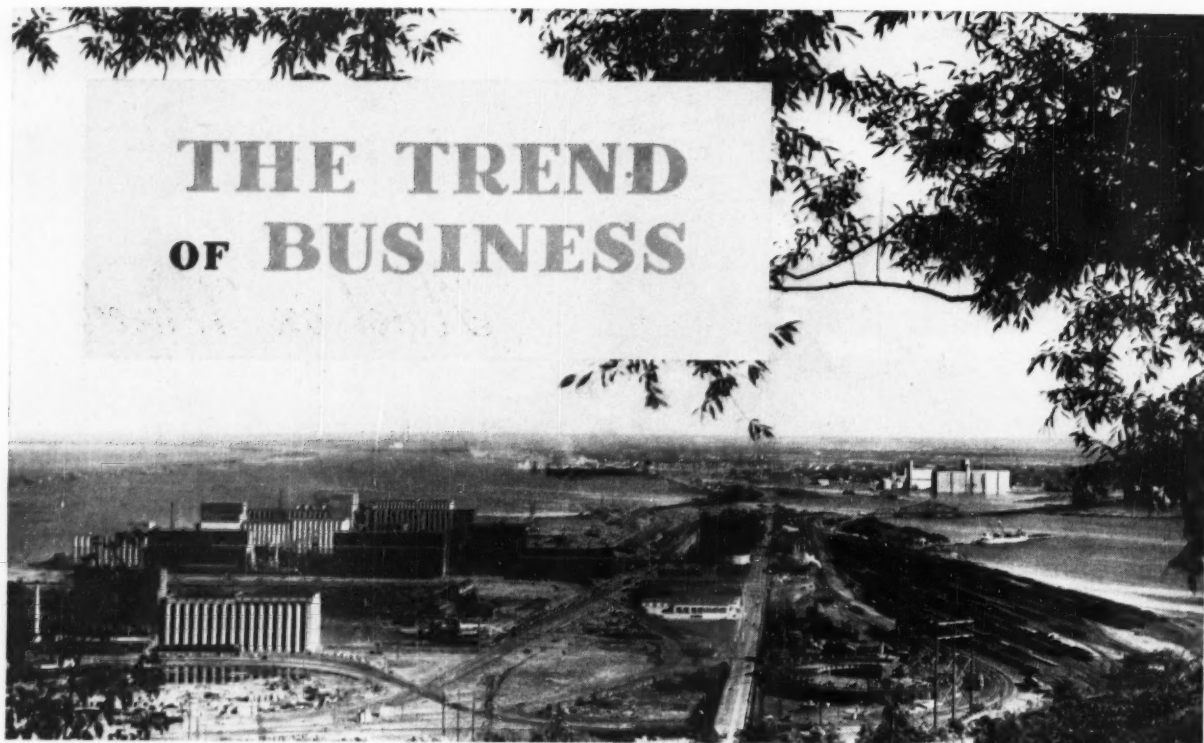
The name "Pullman" has been synonymous with luxury in U. S. travel ever since 1859 when George M. Pullman converted two railroad day coaches into sleeping cars at a cost of \$2,000. The company almost foun-

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With facilities to serve every need, Pullman provides the business man with an office, the hungry family with a restaurant, and the tired travellers with a bedroom. At the same time it carries millions of people to their appointed destinations not in mere comfort, but in luxury. During nearly 100 years it has succeeded in keeping pace with the ever-increasing demands of the travelling public for more and better service, for greater comfort, and for modern efficient equipment.

THE TREND OF BUSINESS



CORSON PHOTOGRAPH FROM DUANEY

PRODUCTION
PRICES
TRADE
FINANCE

Alleviation of supply problems in steel, aluminum, and other metals was made possible by the Government's stretch-out program of arms production. Employment rose, but early estimates indicated less Easter trade than last year. Prices and wages both declined slightly and business failures were not so numerous as a month earlier.

EASING of shortages and a prospect of increased civilian durables output were the most striking aspects of the nation's industrial picture in March. Steel production in the previous month had been the highest, at 8.6 million tons, it had ever been at that time of year, but demand for steel from some quarters slackened. Early this year the military launched a "stretch-out" program, extending the production period on current defense contracts well beyond the time that had at first been planned by them.

With Sabre-jets, tanks, anti-aircraft guns and other war materiel being ejected from assembly lines at an estimated sixteen to twenty months behind their originally established schedules, producers of basic metals once again began looking for takers from the civilian contingent of industry.

Orders, however, were not forthcoming in anticipated volume and some steel producers already found it necessary to reduce operations. The first intimations of slowdown came from Farrell, Pa. where Sharon Steel Corp. announced the closing of two of its sixteen open hearth furnaces.

Meanwhile, shortage problems that had been centered in the nation's supply of primary aluminum also seemed to be dimming. Output of the primary metal started jauntily enough in the first month of the year with production totalling nearly 154 million pounds, 13 per cent more than in the first month of last year.

Other metals in increasingly ample supply were lead and zinc. A sharp increase of foreign lead offerings to United States industrial buyers early in the year allowed NPA to lift pre-

vious restrictions on use of the metal and to increase the permissible inventory of consuming industries to a 60-day supply from the 30-day supply limitation they had formerly maintained. While special high grade zinc supply exceeded its demand by industrial users in February, prime Western grade remained in rather tight supply. Zinc slab production in that month was 10 per cent above that of a year ago and shipments surpassed their year-ago level by 12 per cent.

The alleviation of steel and aluminum shortages was seen as a distinct boon to automobile producers whose curtailed operations at the beginning of the year were at least partly instrumental in making Detroit at that time one of the chief labor-surplus problem areas in the nation. At mid-March auto makers estimated their produc-

THE TREND OF BUSINESS

tion for the month would be the highest, at 365 thousand cars, since last October when 412 thousand were produced by the industry.

Copper continued in short supply, February shipments of the refined metal (even with the help of Government stockpile withdrawals) reaching their lowest ebb in seven months. Refined production, at 96 million tons, was 5 per cent below a year ago.

Although the use of copper by builders was still tightly restricted, builders are to be allotted more liberal supplies of steel for second-quarter industrial, commercial, and highway construction use as well as for home-building requirements. Expenditures for all new construction in the first two months of the year, at \$4.1 billion, amounted to about the same as in the same period last year, but the nature of construction expenditures had changed noticeably since a year ago.

While private residential construction was 20 per cent below last year, and commercial construction was down 36 per cent, these drops were more than offset in that time by the huge expansion in industrial construction of 70 per cent from a year ago and an expansion of naval and military construction of more than four-and-a-half times the year-ago level. The dollar volume of public housing more than doubled over the year.

Employment Pavement pounding of the jobless grew somewhat more audible as the year advanced. In February there were 32 thousand more persons looking for jobs than there had been a month earlier, but the unemployment total was still less than it had been in any February since 1945. At least part of the month-to-month decline was seasonal with the temporary slackening of con-

Compass Points OF BUSINESS



	Year	Nov.	Dec.	Year	Jan.	Feb.
Employment, Civilian	1949	59.5	58.6	1950	56.9	57.0
Million persons	1950	61.3	60.3	1951	59.0	58.9
	1951	61.3	61.0	1952	59.7	59.8
Unemployment	1949	3.4	3.5	1950	4.5	4.7
Million persons	1950	2.2	2.2	1951	2.5	2.4
	1951	1.8	1.7	1952	2.0	2.0
Farm Income	1949	2.9	2.5	1950	2.3	1.8
Billion dollars	1950	3.4	2.8	1951	2.5	1.9
	1951	3.6	3.1	1952	2.6	2.0
Consumers' Credit Outstanding	1949	15.9	16.8	1950	16.4	16.2
Billion dollars	1950	19.4	20.1	1951	19.9	19.5
	1951	20.0	20.6	1952	20.1	...
Gross Hourly Earnings of Industrial Workers	1949	1.39	1.41	1950	1.42	1.42
Dollars	1950	1.51	1.54	1951	1.56	1.56
	1951	1.63	1.64	1952	1.64	...
Weekly Earnings of Industrial Workers	1949	\$54.43	56.04	1950	56.29	56.37
Dollars	1950	62.23	63.88	1951	63.76	63.84
	1951	65.81	67.36	1952	66.77	...
Manufacturers' Sales*	1949	15.8	15.6	1950	15.9	16.6
Billion dollars	1950	20.5	21.0	1951	22.6	22.3
	1951	22.3	21.2	1952	23.0	...
Manufacturers' Inventories*	1949	28.5	28.7	1950	28.7	28.5
Billion dollars	1950	32.2	33.3	1951	34.1	34.7
	1951	41.7	42.0	1952	42.0	...
Wholesalers' Sales*	1949	7.3	7.1	1950	7.1	7.3
Billion dollars	1950	8.3	8.6	1951	9.2	9.2
	1951	8.9	8.5	1952	8.9	...
Wholesalers' Inventories*	1949	7.7	7.7	1950	7.7	7.7
Billion dollars	1950	9.0	9.4	1951	9.5	9.7
	1951	10.0	10.0	1952	10.0	...
Retailers' Sales*	1949	11.0	10.8	1950	11.1	11.3
Billion dollars	1950	11.8	12.6	1951	13.6	13.3
	1951	12.5	12.3	1952	12.6	...
Retailers' Inventories*	1949	15.2	14.5	1950	14.8	14.7
Billion dollars	1950	17.7	17.8	1951	18.5	19.0
	1951	18.3	18.1	1952	18.1	...
Physical Production Index*	1949	173	179	1950	183	180
1935-1939=100	1950	215	218	1951	221	221
	1951	219	218	1952	219	219
Freight Carloadings	1949	2.6	3.1	1950	2.4	2.3
Millions of Cars	1950	3.2	3.6	1951	3.0	2.7
	1951	3.2	3.5	1952	2.8	2.9
Building Permits, 120 Cities	1949	245	249	1950	269	282
Million dollars	1950	338	342	1951	366	261
	1951	237	201	1952	198	243
Commercial and Industrial Failures	1949	835	770	1950	868	811
Number	1950	683	679	1951	775	599
	1951	587	612	1952	671	619
Liabilities of Failures	1949	22.8	19.3	1950	26.4	22.2
Million dollars	1950	18.8	21.0	1951	21.7	16.0
	1951	17.6	19.4	1952	26.2	19.5

* Adjusted for seasonal changes.

These figures bring up to date some of the series in "The Compass Points of Business" quarterly supplement to the February DUN'S REVIEW. The next quarterly supplement will appear in May.

THE TREND OF BUSINESS

PRODUCTION

PRICES

TRADE

FINANCE

Industrial Production

Seasonally Adjusted Index: 1935=100 (1949-1952); Federal Reserve Board

	1949	1950	1951	1952
January	191	181	211	219
February	189	180	211	219
March	184	187	211	
April	179	190	211	
May	174	195	211	
June	169	199	211	
July	170	199	211	
August	170	199	211	
September	174	211	219	
October	166	216	218	
November	173	215	219	
December	179	218	218	

† Approximation; figure from quoted source not available.

Consumers' Price Index

Revised Index: 1945=100 (1949-1952); U. S. Bureau of Labor Statistics

	1949	1950	1951	1952
January	171.7	168.2	181.5	189.1
February	169.9	167.9	181.8	189.1
March	170.4	168.4	181.5	
April	170.7	168.5	181.6	
May	170.6	169.1	181.1	
June	170.6	170.3	181.2	
July	169.6	170.0	181.5	
August	169.9	171.4	181.5	
September	170.7	174.6	181.6	
October	169.7	175.6	181.4	
November	169.8	176.4	181.6	
December	168.8	178.8	181.1	

† Approximation; figure from quoted source not available.

Wholesale Commodity Prices

Index: 1947=100 (1949-1952); U. S. Bureau of Labor Statistics

	1949	1950	1951	1952
January	102.8	97.7	115.0	113.2
February	101.2	98.3	116.5	113.0
March	100.9	98.5	116.5	
April	99.9	98.5	116.9	
May	99.0	99.6	116.9	
June	98.3	100.2	115.1	
July	98.0	101.2	114.2	
August	97.8	101.2	114.7	
September	98.3	107.1	114.4	
October	97.9	107.7	114.7	
November	97.8	109.4	114.6	
December	97.7	112.1	114.5	

† Approximation; figure from quoted source not available.

Industrial Stock Prices

Monthly Average of Daily Index: Dow Jones

	1949	1950	1951	1952
January	179.75	199.79	244.45	271.74
February	174.46	201.46	253.12	265.19
March	175.87	208.39	249.59	
April	175.65	212.62	251.36	
May	174.91	219.36	254.36	
June	165.59	221.02	249.37	
July	171.34	225.30	247.01	
August	179.24	216.60	254.92	
September	180.91	221.33	251.36	
October	186.47	229.13	259.73	
November	180.44	239.48	259.61	
December	166.70	229.36	260.09	

Based on closing prices of 30 industrial stocks.

Employment

Millions of Persons: U. S. Bureau of the Census

	1949	1950	1951	1952
January	57.4	56.9	59.9	59.7
February	57.2	57.0	58.9	59.8
March	57.6	57.6	60.2	
April	57.8	58.7	60.0	
May	58.2	59.7	61.2	
June	59.6	61.5	61.8	
July	59.7	61.4	62.6	
August	59.4	61.2	61.6	
September	59.0	61.8	61.8	
October	59.5	61.4	61.4	
November	59.5	61.4	61.4	
December	58.6	60.3	61.0	

Includes all civilian workers.

Retail Sales

Billions of Dollars: U. S. Department of Commerce

	1949	1950	1951	1952
January	9.5	9.7	11.2	11.3
February	9.4	9.5	11.2	11.0
March	10.7	11.3	11.9	
April	11.4	11.4	11.9	
May	10.9	11.9	12.7	
June	11.0	12.3	12.7	
July	10.4	12.6	12.5	
August	10.0	12.5	12.5	
September	10.4	12.4	12.4	
October	11.4	11.4	12.7	
November	11.1	11.9	12.7	
December	13.2	14.8	14.6	

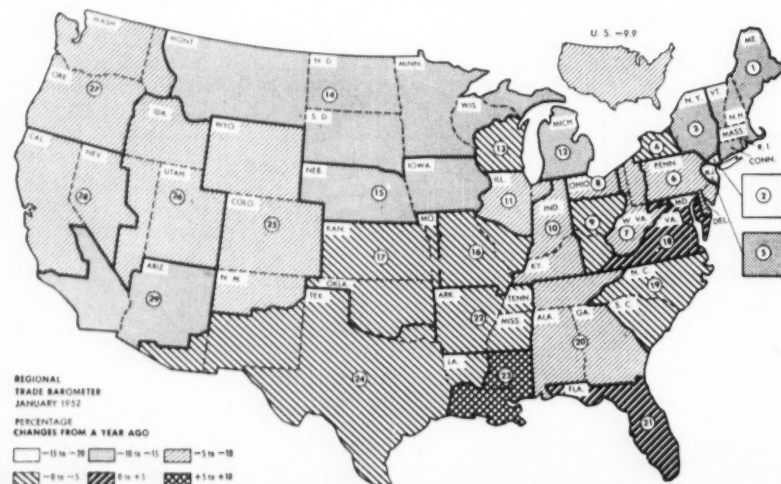
† Approximation; figure from quoted source not available.

Those with jobs comprised 96.6 per cent of the labor force, fractionally less than in the first month of 1952.

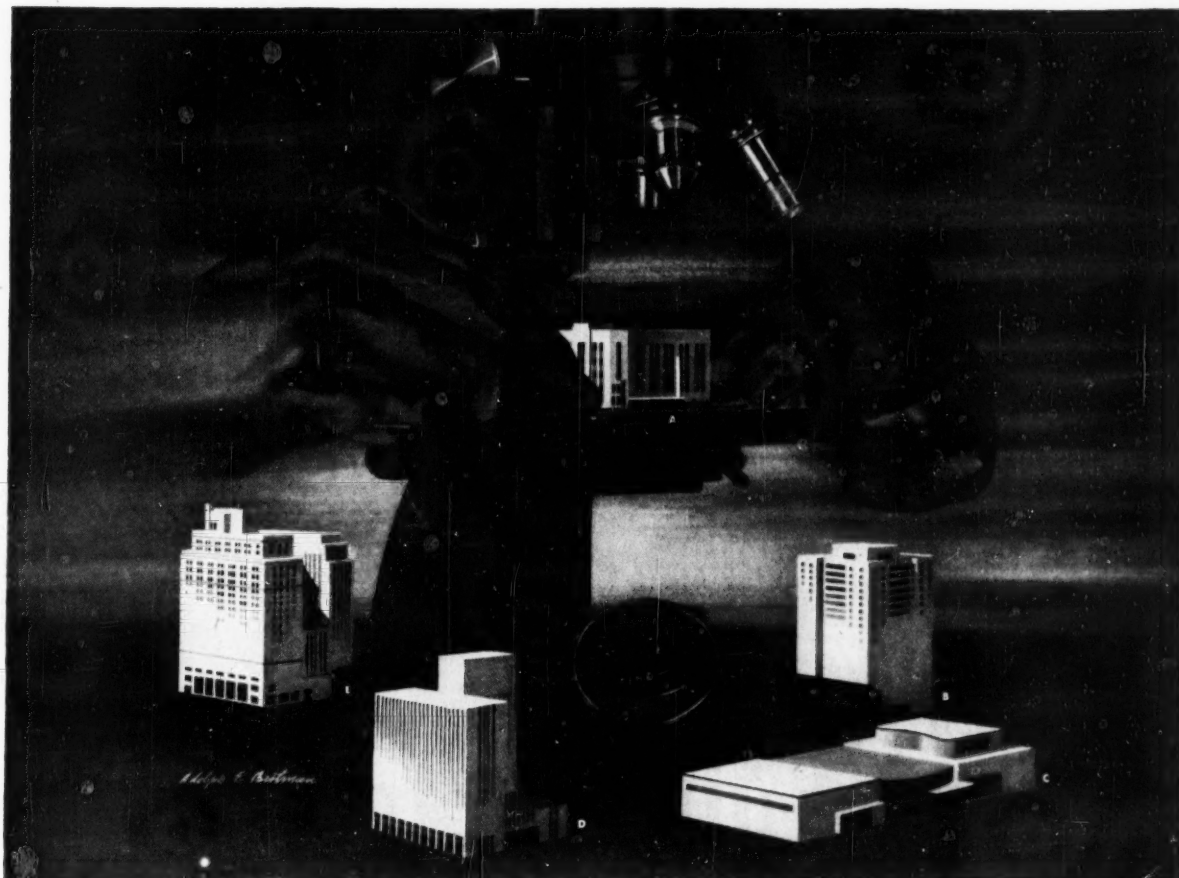
Comparisons with a year ago of employment in various nonagricultural lines indicate that the largest increases at the beginning of the year were in Government, up 7 per cent, and in financial institutions, up 4 per cent. Mining and manufacturing, both with slight dips from a year ago, were the only two groups in which employment showed declines.

Trade Up to the middle of March the nation's shoppers had not shown any special signs of eagerness to embellish their Easter wardrobes. The weekly department store sales figures published by the Federal Reserve Board continued to hover considerably below 1951 levels. However, most retailers held out hopes that the week or two before Easter would witness a marked spurt in spending for the traditional frills and furbelows of the season.

While apparel did not sell so well in March as a year ago, food retailers managed to chalk up sales totals averaging 2 to 3 per cent above last year's levels. Aggressive promotions of household lines attracted some, but not quite all, of the desired response from early Spring shoppers. Purchases of hardware and decorating materials mounted moderately in correspondence



REGION: (1935-1939=100)	Jan. 1952	% Change from— Dec. 1951	Jan. 1951
United States.....	324.5	+ 5.0	— 9.9
1. New England.....	245.2	+ 1.4	— 11.5
2. New York City.....	254.6	+ 1.8	— 18.8
3. Albany, Utica, and Syracuse	305.2	— 6.7	— 12.4
4. Buffalo and Rochester.....	322.5	+ 6.2	— 3.0
5. Northern New Jersey.....	246.9	— 0.4	— 12.0
6. Philadelphia.....	305.5	+ 12.2	— 7.7
7. Pittsburgh.....	340.9	+ 18.0	— 5.0
8. Cincinnati and Columbus.....	355.4	+ 8.8	— 6.0
9. Cincinnati.....	354.7	+ 6.9	— 4.4
10. Indianapolis and Louisville	381.9	+ 1.0	— 9.0
11. Chicago.....	307.7	+ 14.4	— 9.0
12. Detroit.....	350.6	+ 12.5	— 14.4
13. Milwaukee.....	374.0	+ 14.2	— 4.8
14. Minneapolis and St. Paul.....	327.0	+ 0.8	— 11.8
15. Iowa and Nebraska.....	318.8	— 3.7	— 14.4
16. St. Louis.....	304.7	+ 4.4	— 3.0
17. Kansas City.....	378.8	+ 8.2	— 4.3
18. Maryland and Virginia.....	348.8	+ 6.4	+ 1.2
19. North and South Carolina.....	348.6	+ 3.5	— 4.5
20. Atlanta and Birmingham.....	441.1	+ 11.2	— 6.3
21. Florida.....	397.6	— 9.0	+ 1.0
22. Memphis.....	417.4	+ 17.4	— 4.8
23. New Orleans.....	426.5	+ 4.0	+ 5.4
24. Texas.....	446.4	— 3.2	— 3.0
25. Denver.....	340.7	— 4.5	— 6.7
26. Salt Lake City.....	356.7	— 0.9	— 8.9
27. Portland and Seattle.....	356.3	— 4.4	— 9.6
28. San Francisco.....	346.9	+ 1.3	— 6.8
29. Los Angeles.....	341.3	+ 2.1	— 12.2



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THE TREND OF BUSINESS

with the usual Springtime urgency of household maintenance and repair needs. Television sets, furniture, and floor coverings were bought with less enthusiasm than earlier in the year. Practically all consumer hard lines showed unfavorable sales comparisons with March of last year.

The DUN'S REVIEW Regional Trade Barometer, reflecting consumer spending patterns in 29 regions, fell 1 per cent after seasonal adjustment to 321.6 (preliminary) in February, or 2 per cent below a year ago. Although most regions were below a year ago in January, gains of 1 per cent were recorded for both the Maryland and Virginia Region (18) and the Florida Region (21) and a gain of 5 per cent occurred in the New Orleans Region (23). The largest drop was 19 per cent for the New York City Region (2).

By mid-March most apparel dealers had completed their Easter stocks and were beginning to fill in on anticipated Summer needs with considerable interest centering in rayon suits, cotton

Weekly Business Signpost

SELECTED BUSINESS INDICATORS	LATEST WEEK*	PREVIOUS WEEK	YEAR AGO
Steel Ingot Production <small>Ten Thousand Tons</small>	213	211	20
Bituminous Coal Mined <small>Hundred Thousand Tons</small>	99	103	100
Automobile Production <small>Thousand Cars and Trucks</small>	110	107	16
Electric Power Output <small>Ten Million K.W. Hours</small>	741	750	69
Freight Carloadings <small>Thousand Cars</small>	714	756	75
Department Store Sales <small>Index Number (1935-1939=100)</small>	253	245	28
Wholesale Prices <small>Index Number (1947-1949=100)</small>	111	111	11
Bank Debits <small>Hundred Million Dollars</small>	283	243	28
Money in Circulation <small>Hundred Million Dollars</small>	285	285	27
Business Failures <small>Number of Failures</small>	156	170	18

*Steel, automobile, price and failures data are for the third week of March; all other figures are for the second week.
Sources: Amer. Iron & Steel Inst.; U. S. Bureau of Mines; Automotive News; Edison Electric Inst.; Amer. Assoc. of Railroads; U. S. Bureau of Labor Statistics; DUN & BRADSTREET, INC.



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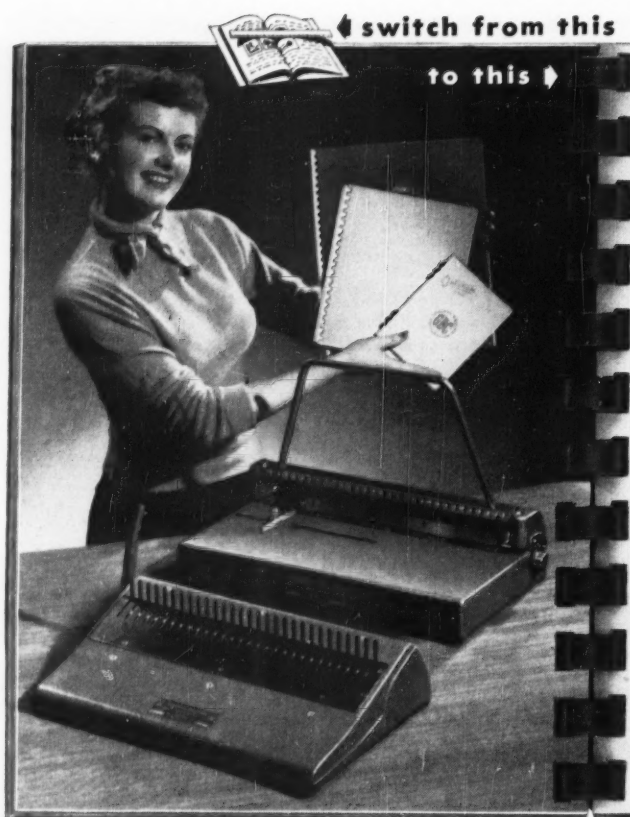
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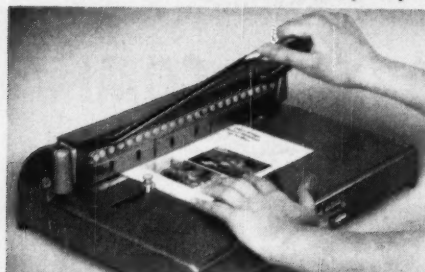
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THE TREND OF BUSINESS

dressess, and sportswear in the medium-priced group. The lull in most textile markets, which began after the inventory splurge of a year ago, continued into March. Activity in the gray goods market was limited mostly to a mild interest in sheetings, drills, and twills. The wholesale demand for nylon fabrics continued to be comparatively more vigorous than for cotton, wool, or rayon.

Buyers of household goods ordered less in March than a year earlier. The most favorable year-to-year comparisons were in such lines as bedding, incidental furniture, and decorating materials, while the call for appliances and television sets was relatively small. The demand for industrial goods abated moderately with the reduction in military output schedules. Cancellations, specification changes, delivery stretch-out, and pilot line operations became increasingly instrumental in the decline of defense orders.

Prices and Wages Wholesale commodity prices in the nation's spot markets turned slightly upward toward the middle of March. A continued large export demand helped to bring a somewhat firmer undertone to wheat prices. Beneficial rains and snows in the Western Winter wheat belt seemed to have no appreciably deleterious effect on prices for the bread cereal. Corn prices were bolstered by a falling off in receipts of high moisture corn coupled with pessimistic reports concerning the

DAILY WHOLESALE PRICE INDEX

The index is prepared on the basis of daily spot closing prices of 30 primary commodities (1930-1932=100).

Week Ending:	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Mar. 15..	302.21	302.21	301.48	301.82	302.81	303.00
Mar. 8..	302.11	301.06	300.57	300.72	301.15	301.11
Mar. 1..	304.40	303.13	302.70	302.25	301.99	302.09
Feb. 23..	302.80	303.73	304.06	304.13	Holiday	304.29
Feb. 16..	304.58	Holiday	305.19	305.29	304.60	304.55

WHOLESALE FOOD PRICE INDEX

The index is the sum total of the prices per pound of 34 foods in general use. It is not a cost-of-living index.

Latest Weeks	Year Ago	1952
Mar. 18.. \$6.54	Mar. 20.. \$7.23	High Jan. 1.. \$6.64
Mar. 11.. 6.58	Mar. 13.. 7.27	Low Mar. 18.. 6.54
Mar. 4.. 6.56	Mar. 6.. 7.27	1951
Feb. 26.. 6.58	Feb. 27.. 7.25	High Feb. 29.. \$7.31
Feb. 19.. 6.60	Feb. 20.. 7.31	Low Dec. 18.. 6.63

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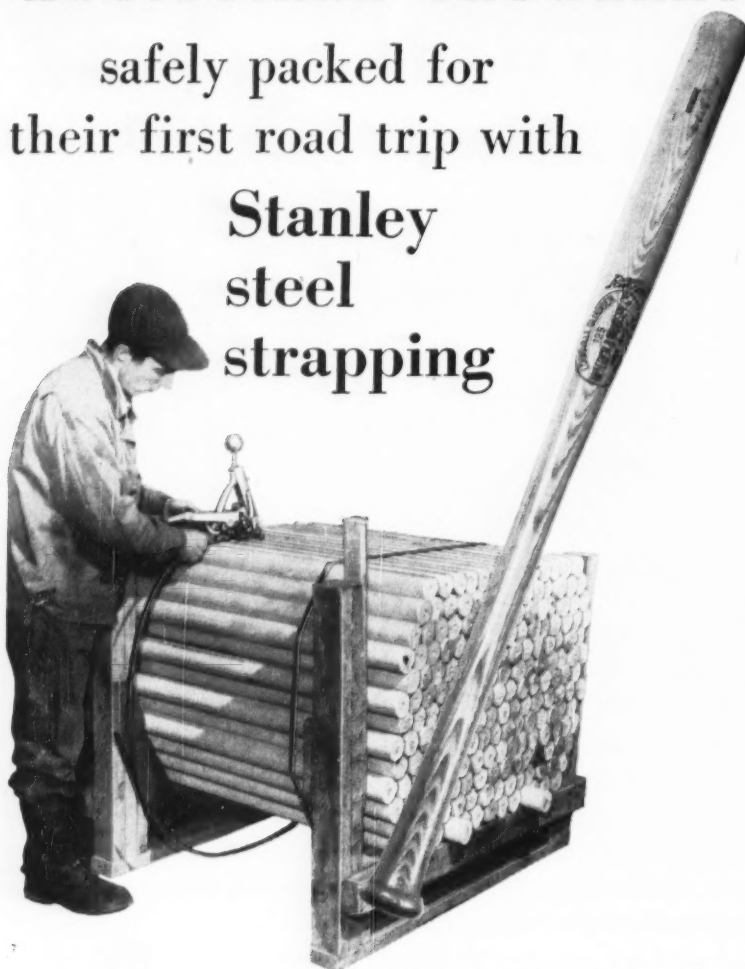
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THE TREND OF BUSINESS

Argentine corn crop's current outlook.

Prices for most feed grains were steady with to somewhat higher than earlier levels. Despite an increase in marketings, oats prices advanced noticeably. Domestic flour prices tapered off somewhat in the face of an apathetic buyer demand. Spot cocoa prices were generally maintained at ceiling levels and coffee prices moved higher with aggressive buying. Raw sugar prices continued to rise in both domestic and world markets, partly attributable to the Cuban revolt early in the month.

Spot cotton prices were generally steady. A larger export demand was partially offset by occasional liquidation of considerable proportions, the latter being influenced both by the continued slow movement of textiles in the domestic market and reports that much needed moisture had been received in parts of the cotton belt. In the livestock markets hog and lamb prices registered moderate declines while steer prices edged slightly upward.

Consumers were paying slightly lower prices for food at the end of February than they were a month previously, according to a Bureau of Labor Statistics eight-city survey. Down 1.4 per cent in the month, food prices were nevertheless still 11.8 per cent above what they were before the Korean fracas began. Increases in the prices

BANK CLEARINGS—INDIVIDUAL CITIES (Thousands of dollars)

	1952	1951	% Change
Boston	2,151,215	2,130,121	+ 1.0
Philadelphia	4,460,000	4,118,000	+ 8.3
Buffalo	445,254	401,474	+10.9
Pittsburgh	1,382,079	1,349,955	+2.3
Cleveland	1,710,484	1,584,555	+7.9
Cincinnati	869,767	854,668	+1.8
Baltimore	1,072,224	1,010,059	+6.2
Richmond	623,407	584,709	+6.6
Atlanta	1,228,700	1,144,800	+7.3
New Orleans	664,141	534,434	+24.8
Memphis	441,823	389,766	+13.3
Chicago	3,431,400	3,116,038	+10.1
Detroit	2,158,583	1,900,294	+13.6
St. Louis	1,214,267	1,177,235	+3.1
Louisville	648,067	581,498	+11.3
Minneapolis	1,186,205	1,141,114	+4.0
Kansas City	1,435,159	1,355,484	+5.9
Omaha	639,865	614,766	+4.1
Denver	541,754	490,570	+10.4
Dallas	1,458,714	1,218,394	+19.7
Houston	1,308,592	1,086,775	+20.4
San Francisco	2,102,464	2,035,163	+3.3
Portland, Ore.	610,366	585,622	+4.2
Seattle	639,315	591,820	+8.0
Total 24 Cities	32,287,244	30,125,559	+7.2
New York	31,684,559	30,460,273	+4.0
Total 25 Cities	66,270,783	61,085,832	+8.6
Daily Average	3,011,773	2,770,629	+9.1

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The cost of "playing it safe" with Recordak microfilming is often far less than the amount now represented in unnecessary—and ever-growing—floor space and filing equipment. For, today, you can order a Recordak Microfilmer—just right for your requirements—on a surprisingly low-cost purchase or rental basis... and record your documents at a "hundred per minute" rate... *for a fraction of a cent apiece.*

Get complete details on Recordak microfilming—now increasing protection and simplifying daily routines in 65 different types of business... thousands of concerns. Write Recordak Corporation (Subsidiary of Eastman Kodak Company), 444 Madison Avenue, New York 22, N. Y.



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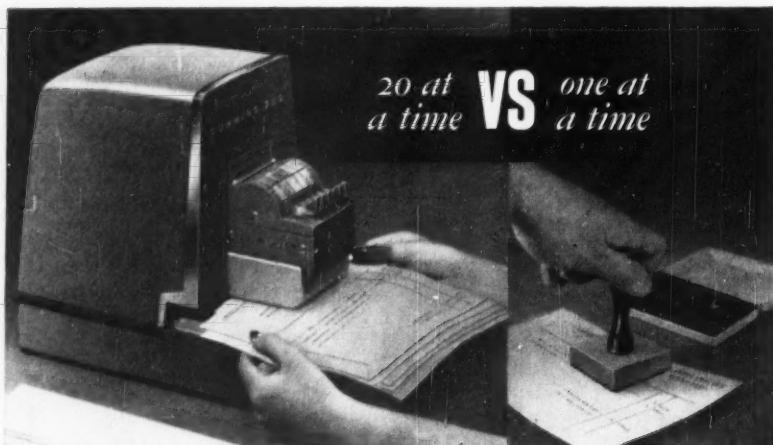
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originator of modern microfilming — and
its application to business systems

"Recordak" is a trade-mark



Cummins Multiple Marking can give you 20 to 1 savings IN TIME AND SALARIES



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Wherever you use a hand stamp for validating, approving, dating, receipting, numbering, coding or canceling you can do the job in one-twentieth the time with Cummins multiple marking!*

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YOU CAN'T ERASE A HOLE

THE TREND OF BUSINESS

of fruits, vegetables, and dairy products failed to offset declines in meat, fish, poultry, lard, and margarine. Prices for consumer goods in general were unchanged last January from the December level, the first time since last August that a monthly increase was not evident, but prices were 5 per cent higher than a year ago and 11 per cent higher than they were in that crucial June of 1950.

Weekly pay envelopes of the nation's production workers were lighter, on the average, by 57 cents in January than they were in the final month of 1951. The drop in earnings to \$66.79 mostly betokened a drop of half an hour from the average work week. Hourly earnings were up by a little more than half a cent from the December level. The weekly take was still 5 per cent above that of last year.

Finance Stock prices moved moderately upward early in March with initial strength in rails broadening almost simultaneously into a rising demand for industrials and utilities. Bond prices were generally steady. The Dow-Jones average of 30 industrial stocks fell to 265.19 in February from the 271.71 recorded a month earlier. The month's average was 5 per cent above a year ago.

Aggregating 27.2 million shares

NEW BUSINESS INCORPORATIONS

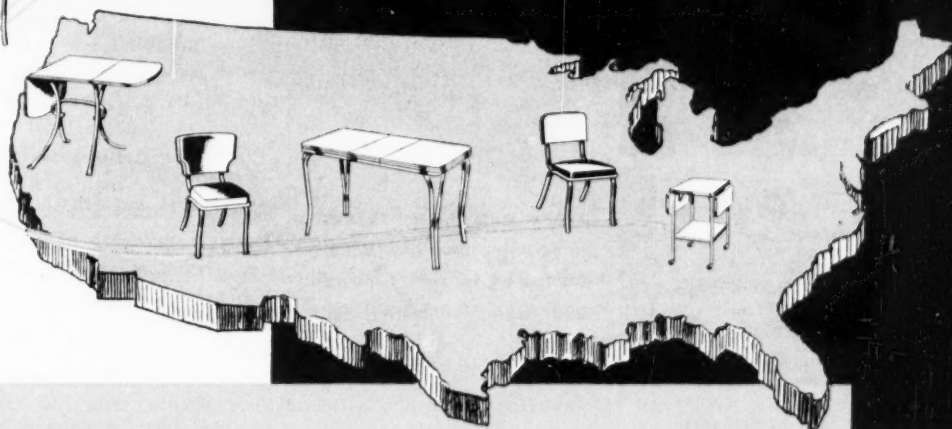
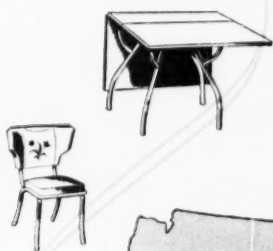
Geographical Regions:	Jan. 1953	Jan. 1951	Dec. 1951	Jan. 1950
New England.....	532	537	617	598
Middle Atlantic.....	3,191	3,253	2,122	3,293
East North Central.....	1,226	1,457	1,164	1,525
West North Central.....	351	369	423	409
South Atlantic.....	1,156	1,166	985	1,183
East South Central.....	228	208	187	274
West South Central.....	412	415	219	607
Mountain.....	308	305	219	845
Pacific Coast.....	794	774	763	833
Total U. S.....	8,357	8,515	6,913	9,070

BUILDING PERMIT VALUES—215 CITIES

Geographical Divisions:	February 1953	1951	% Change
New England.....	\$14,980,048	\$28,645,075	-47.7
Middle Atlantic.....	62,395,102	54,928,558	+13.4
South Atlantic.....	34,068,865	43,472,682	-22.0
East Central.....	55,469,590	46,473,404	+19.4
South Central.....	58,666,245	59,139,485	-0.3
West Central.....	22,555,473	14,176,924	+59.1
Mountain.....	40,572,531	12,495,823	+17.0
Pacific.....	55,437,955	69,009,112	-19.7
Total U. S.....	\$313,154,679	\$327,241,738	-4.3
New York City.....	\$43,765,418	\$24,348,571	+38.9
Outside N. Y. City..	\$279,389,261	\$302,893,167	-7.8

TO MAINTAIN
NATIONAL
LEADERSHIP..

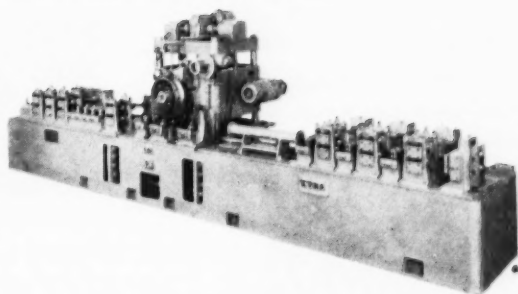
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FOR MORE THAN HALF A CENTURY**



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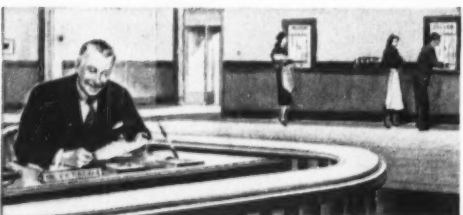
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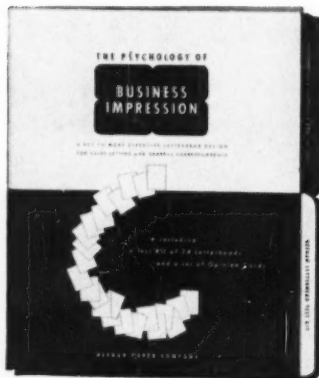


PEOPLE WHO BUY from you often get their first impression of your organization from your letterhead.



PEOPLE WHO ARE IMPORTANT to your business success are influenced by the character and quality of your letterhead.

Thousands of executives and professional men have read *The Psychology of Business Impression*, and have registered their letterhead preferences in the nationwide Neenah Letterhead Test. This is the most practical method yet developed for designing letterheads that fit your business and your market. The portfolio includes a Test Kit of 24 basic letterhead treatments with type and production specifications. To get a free copy, check the coupon below, sign your name, and attach to your letterhead.



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THE TREND OF BUSINESS

traded in February, New York Stock Exchange transactions amounted to 34 per cent lower volume than a year ago. Bond volume on the Big Board in February amounted to a par value of \$49.1 million, down 44 per cent from a year ago. Both stocks and bonds were traded in 27 per cent less volume than in the first month of the year.

The nation's money supply, one of the key indicators of inflationary and deflationary trends, dropped \$600 million in January. The first dip in nine months, it possibly marked the beginning of a rest from inflation.

Failures Business failures were not so numerous in February as they were a month earlier. Down 8 per cent to 619, they were nevertheless 3 per cent more than in February of last year. It was the first time in twenty-one months that business casualties had been heavier than in a corresponding month of the pre-

FAILURES BY DIVISIONS OF INDUSTRY

	(Current liabilities in thousands of dollars)		Liabilities	
	2 Months	2 Months	1952	1951
1952	1951	1952	1951	
MINING, MANUFACTURING...	276	239	13,079	11,309
Mining—Coal, Oil, Misc....	3	3	207	319
Food and Kindred Products	39	28	1,126	1,668
Textile, Products, Apparel...	74	66	2,846	3,415
Lumber, Lumber Products...	31	45	1,218	1,481
Paper, Printing, Publishing	18	12	597	407
Chemicals, Allied Products...	6	8	200	318
Leather, Leather Products...	13	12	627	180
Stone, Clay, Glass Products...	12	5	808	61
Iron, Steel, and Products...	4	6	110	168
Machinery	24	20	3,812	1,971
Transportation Equipment...	9	1	495	11
Miscellaneous	44	43	1,433	1,410
WHOLESALE TRADE	122	142	6,889	4,150
Food and Farm Products...	49	39	3,273	1,204
Apparel	11	6	252	155
Dry Goods	9	3	286	55
Lumber, Bldg. Mats., Hdwr.	9	15	796	603
Chemicals and Drugs	2	4	213	146
Motor Vehicles, Equipment...	3	5	94	40
Miscellaneous	48	70	1,975	1,907
RETAIL TRADE	652	714	14,399	14,733
Food and Liquor	156	161	2,417	2,404
General Merchandise	18	33	848	608
Apparel and Accessories	125	121	2,233	1,996
Furniture, Furnishings	66	86	1,769	4,771
Lumber, Bldg. Mats., Hdwr.	32	36	728	655
Automotive Group	46	48	1,455	893
Eating, Drinking Places	135	140	3,168	2,259
Drug Stores	22	16	310	189
Miscellaneous	52	73	1,481	898
CONSTRUCTION	138	157	4,607	4,621
General Building Contractors	55	56	2,221	1,512
Building Sub-contractors...	77	94	2,181	2,676
Other Contractors	6	7	205	453
COMMERCIAL SERVICE	102	122	5,808	2,881
Passenger and Freight Trans.	34	28	3,514	950
Miscellaneous Public Services	7	7	400	249
Hotels	4	3	298	204
Cleaning, Dyeing, Repairs...	13	22	187	251
Laundries	5	6	74	82
Undertakers	3	..	48	..
Other Personal Services...	10	13	35	284
Business, Repair Service...	27	43	1,477	861



One of the most Serious Shortages in America today...

Executive Manpower!

Well-rounded executive leadership is the greatest asset any business has . . . because the fortunes of all organizations depend upon the men who shape and guide policy. Without intelligent direction any company would fail.

That is why the situation today should be a matter of grave concern to everybody. For the average age of top-level administrators has risen dangerously high, and there is an acute shortage of replacement material. This condition exists despite the efforts of many of the largest organizations which have instituted successful company-sponsored training programs at great expense.

The responsibility is two-fold:

It rests in the hands of both *management* and the *individual*.

When *management* fails to encourage broad-gauge executive training, it falls down in its obligation to protect the long-term interests of stockholders, employees and the public.

When *individuals* . . . men of native ability and character . . . fail to fulfill their promise, they rob themselves and their families of the material rewards and satisfaction that come with success; and they deprive business of sorely-needed managerial talent.

Only through the active cooperation of management and qualified employees, working under systematic guidance, can we solve the serious executive manpower problem that threatens our economy today.

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SEND FOR THIS FREE BOOKLET ON EXECUTIVE-TRAINING!

The Alexander Hamilton Institute has been a rich source of help both to ambitious individuals and to companies interested in encouraging the progress of their key men—particularly to those organizations whose resources and facilities are limited. Top executives in many lines of business frequently suggest the Modern Business Course and Service to men of promise.

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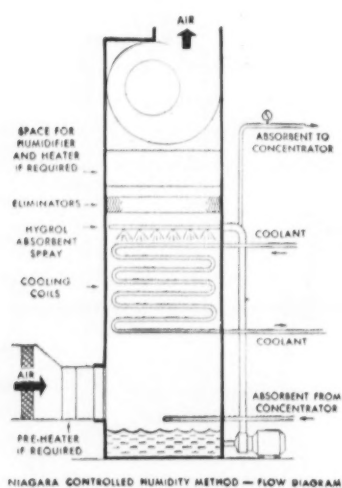
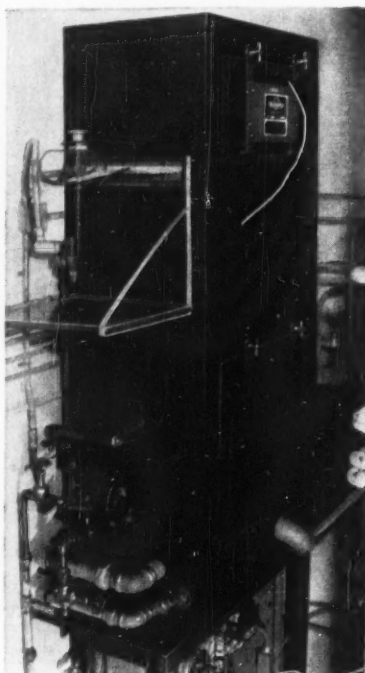


New "Controlled Humidity" Method Gives a Better Solution to Air Conditioning Problems

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Write for Bulletin 112

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Investigate this new Niagara Method for "comfort" air conditioning as well as to protect quality in hygroscopic material, or processes or instruments, or to prevent condensation damage to metals, parts or products.

THE TREND OF BUSINESS

ceding year. That the monthly decline was not merely a reflection of the fewer days in February, however, may be seen in the DUN'S FAILURE INDEX figure which, after seasonal correction, dipped to an annual rate of 26 failures for every, 10,000 listed enterprises from the previous month's index of 28.

Liabilities involved in the month's failures dropped 26 per cent to \$19.5 million. This amounted to \$3.5 million more than the liabilities of a year ago.

Both manufacturing and trade failures were fewer than in January, while more failures were reported in construction (mostly in plumbing, heating, and electrical subcontracting) and commercial services. Manufacturing as well as construction failures numbered more than they did in February of last year. All areas except the Pacific and Mountain States reported less failures than in the first month of the year.

THE END

BUSINESS FAILURES are industrial and commercial enterprises which have discontinued operations with a resultant loss to creditors, businesses involved in court actions such as receivership, reorganizations, or arrangement which may or may not lead to discontinuances, and businesses reaching voluntary compromises with creditors which became a matter of public record.

CURRENT LIABILITIES, as used in the Failure Record, have a special meaning; they include all accounts and notes payable and all obligations, whether in secured form or not, known to be held by banks, officers, affiliated companies, supplying companies, or the Government. They do not include long-term, publicly-held obligations. Offsetting assets are not taken into account.

THE FAILURE RECORD

	Feb. 1952	Jan. 1952	Feb. P. C. 1951 Chg.
DUN'S FAILURE INDEX*			
Unadjusted	31.0	29.7	31.0 - 0
Adjusted, Seasonally....	26.3	27.8	26.3 - 0
NUMBER OF FAILURES.....	619	671	599 + 8
NUMBER BY SIZE OF DEBT			
Under \$5,000.....	117	119	145 - 19
\$5,000-\$25,000.....	328	343	302 + 3
\$25,000-\$100,000.....	148	154	121 + 27
\$100,000- and over....	36	55	31 - 15
NUMBER BY INDUSTRY GROUPS			
Manufacturing	133	143	107 + 24
Wholesale Trade.....	60	62	69 - 13
Retail Trade.....	304	348	304 - 0
Construction	70	68	60 + 17
Commercial Service....	52	50	59 - 12

(Liabilities in thousands)

CURRENT.....	19,474	\$26,208	\$16,009 + 22
TOTAL.....	19,624	26,390	16,414 + 20

* Apparent annual failures per 10,000 enterprises, formerly called DUN'S INSOLVENCY INDEX.

† Per cent change of February 1952 from February 1951.



**"Sure, he's got a low number
... his uncle's the Mayor!"**

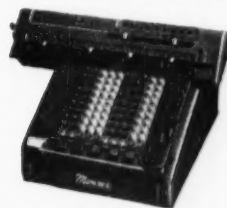
Sometimes a political machine can get you a low number. But if you're involved in more complex figures... business statistics, say... try a *business machine*. Better yet a Monroe. Because Monroe... hear ye... handles *all* kinds of numbers—low, high, simple, complex. In fact, whatever your figuring or accounting problem, Monroe makes the model to solve it. Fast. Efficiently. Economically. The moral of our story, of course, is: wherever you find figures, you'll find Monroes. Except jail.

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MONRO-MATIC The latest for fast, fully automatic, economical figuring. Compact, portable, with famous "Velvet Touch" ease of operation. Long, dependable service.



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*"VELVET TOUCH" originated in 1935 to describe Monroe's matchless ease of operation.

Every Monroe is sold only through Monroe-owned branches; serviced by Monroe's factory-trained organization.

50% SAVINGS IN WATER—thanks to this *Gilbert-Engineered waste-treatment system!*

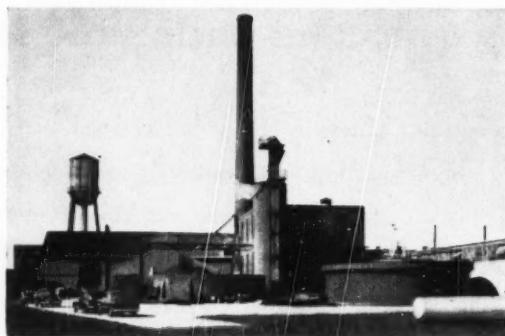
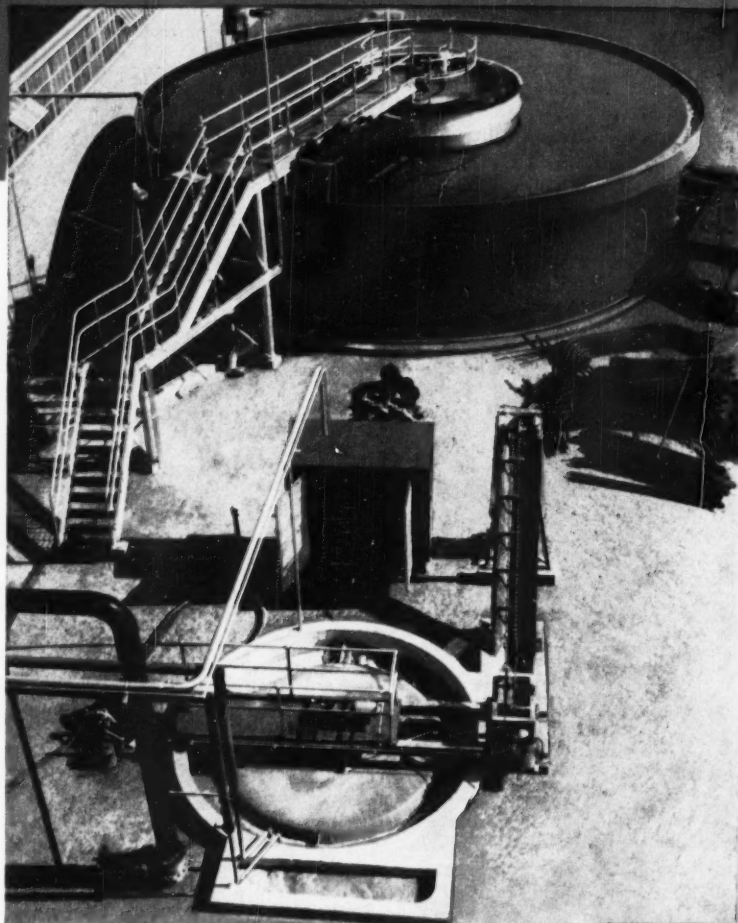
Yes, the figures are amazing—but true! A Gilbert-engineered waste-treatment system reduces the monthly water bill of the Norristown Magnesia & Asbestos Company by 50%! *And that's not all.*

This large Pennsylvania paper mill's raw material losses are cut 9%, its product is improved in quality, plant production is up, and the amount of stream pollution now conforms to state requirements. All this—a *direct* result of a proper waste-treatment system!

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The Business Bookshelf

Selling Unlimited

PERSONAL SUPERVISION OF OUTSIDE SALESMEN, by Charles L. Lapp, Ph.D. The Ohio State University, Columbus, 320 pages.

This highly practical compendium of the results of a Kinsey-like approach to the problem of the supervision of outside salesmen would make a most welcome addition to the sales manager's working library. Through the co-operation of The National Sales Executives, Inc., and the Bureau of Business Research of The Ohio State University, personal interviews were held with, and detailed questionnaires were received from, more than 1,100 executives and salesmen in diverse fields and many sections of the nation.

Considered in some management circles as the most direct way to increase sales, the personal supervision of salesmen is particularly vital at the present when many markets are apparently in the buyers' thrall. Emphasis throughout the book is on developing the technique of directing without driving, supervising without overtly watching. Virtually all possible agents of supervision from company president to private detective are considered as well as every conceivable device from

surprise visits to teletype conversations.

The author avoids the hortatory approach to improving salesmanship. Rather the stress is upon the concrete, detailed experience of many companies. Consonant with the most recent findings about human motivation, the volume stresses the need felt by many salesmen for social acceptance and usefulness. Some companies resorting to what are considered euphemisms, insist that salesmen call themselves merchandising representatives, sales engineers, and managers, and so bring about an apparent dearth of salesmen, who by whatever name are the swagmen of business.

Studded with clear understandable tables, the work is a valuable source book for the attitudes and responses of salesmen of all shadings from commercial travellers to sales engineers. Included is a wealth of information drawn from the experiences of many successful companies on the optimum frequency of sales meetings, the preparation of reports, psychological testing, methods of training, values of contests, methods of compensation; and various checklists for evaluating the performance of both the salesmen and their supervisors.

OTHER CURRENT READING

BOOK	SUMMARY
MAKING PROFITS IN THE STOCK MARKET, by J. O. Kammi. World Pub. Co., 157 pages \$2.	A former child-prodigy of the financial world, now a 34-year old writer-lecturer and corporation director, reveals his secret cache of clues to successful security trading.
SHAREHOLDER RELATIONS, by H. C. Reuter. Reuter & Bragdon (Pittsburgh), 117 pages, \$5.	Another side of stock ownership is treated by Mr. Reuter and his fellow researchers: the increasing importance of shareholding in policy-formation and promotional matters.
CHANGING CONCEPTS OF BUSINESS INCOME. Macmillan, 160 pages, \$2.	Economic, legal, and political implications of various income-deriving procedures, compiled by a group of specialists in law and business.
A MODERN COURSE IN SALESMANSHIP, by J. S. Knox and John Knox. Knox Bus. Books (Oak Park, Ill.), 579 pages, \$4.50.	Besides an interesting presentation of the usual hints for "closing the sale," this book goes off the beaten path with a thorough discussion of personality and other less tangible aspects of selling.
NEIFELD'S GUIDE TO INSTALLMENT COMPUTATIONS, by M. R. Neifeld. Mack Pub. Co. (Easton, Pa.), 410 pages, \$6.	An exhaustive, at times fairly arithmetic, survey of the installment buying field, with stress on computing payments; of special interest to automobile dealers, finance companies, banks, and related enterprises.
MEASURES OF BUSINESS CHANGE, by A. H. Cole. Irwin (Chicago, 444 pages \$7.50.	An invaluable reference work, indexing primary sources for statistical information on every industry; national and regional listings are included.

Questions to ask about your Service Award Plan

- Does your Service Award have lasting value in itself—or does your award fade quickly in memory and appreciation?
- Does your Service Award have useful value for years to come—or merely mark the occasion and nothing more?
- Does your Service Award have instant recognition—is it an award that honors you as well as your employee?

A fine watch answers every Service Award question perfectly... especially when it's the finest of all watches, a Lord or Lady Elgin with the heart that never breaks—the *guaranteed* DuraPower Mainspring.

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A Saga of Steel

THE SEAMLESS STORY, by J. Perc Boore. Commonwealth Press, Los Angeles, 285 pages, \$5.75.

While a business history, this volume differs considerably from many similar efforts by the scope and importance of its subject matter and the lively drama of its style. Mr. Boore, himself a worker in every phase of the seamless tube industry for forty years, has written a thoroughly absorbing account of the development and subsequent perfection of this vital link in the chain of modern steel production. Sprightly biographies of early companies and of the colorful men who founded them will delight all who are currently in the trade. Victor Polansky has compiled a first-rate technical bibliography.

Help Offered

HOW TO USE YOUR TRADE ASSOCIATION, by Walter Mitchell, Jr. Prentice-Hall, Inc., New York, 287 pages, \$5.25.

Sometimes maligned as "the union of the bosses," the trade association is becoming increasingly important as a management tool for the betterment of both business and the community. In attempting to stabilize business at progressively higher levels, group action seems quite unavoidable. Whether the efforts are to be those of Government or business is largely dependent on the extent to which the facilities available to management for group co-operation are utilized.

For those solitudinarians reluctant to join and for those holding nominal membership but not an avid interest in making use of it, the author catalogues in detail—frequently by the case-history method—the facilities offered by the trade association. How far into the dangerous arena of price agreements a management can venture without being gored by the antitrust division is ably discussed. How some industries have placed vital patents in communal pools with a resultant flow or stagnation of income is also described. The stress throughout is upon those affirmative, beneficial actions done through trade associations rather than the baneful collusive agreements which tarnished some trade groups in the adolescent period of industrial growth.

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National Can Corporation knows it pays to lease trucks from Hertz!

The National Can Corporation, like hundreds of other progressive firms, has found leasing trucks from Hertz the low-cost, worry-free solution to trucking problems. Whether you need one or a hundred, count on Hertz for trucks.



The rapidly growing Hertz Truck Lease Plan releases your capital investment for other purposes. Hertz garages, maintains the trucks . . . furnishes *everything*, in fact, but the driver! You enjoy every advantage of ownership without any of its "headaches" . . . yet it often actually costs less than ownership!

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Stores • Drugs • Laundries & Dry Cleaners • Restaurants • Meat & Fish • Groceries, Fruit & Produce • Newspapers • Printing • Brewers & Beer Distributors • Furniture & Rugs • Steel & Electrical • Paper • Musical Instruments • Beverage, Wine & Liquor.

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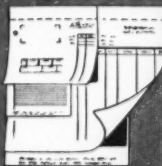
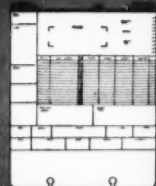
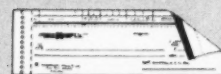
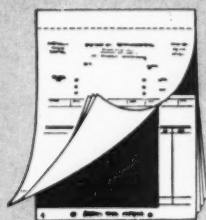
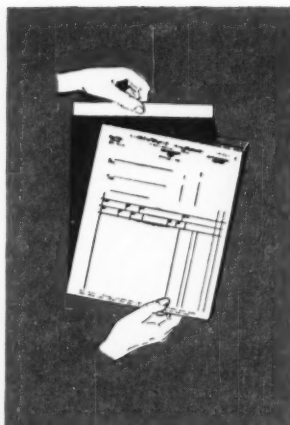
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taken through trade groups when confronted with perplexities in raw material sources, current market developments, public relations, research, rates of compensation, personnel training, product standardization, accounting methods, among many, and especially vital at the present time: dealing with the Government. An association can frequently offer valuable yardsticks for measuring accomplishment. In short, trade associations appear to be productive as Springtime hares in multiplying individual experiences.

Of course, the scope of intra-trade cooperation is one marked by Federal and State strictures and in addition limited by competition from individual companies which can more efficiently provide services—such as collections and credit reporting—than can trade associations.

In addition to the myriad services offered managements, there are essential functions of the trade association vis-à-vis other segments of our society. In the frantic jostle—sometimes disorderly but yet so characteristic of the democratic way of living—of labor, farmers, consumers, and professional groups to influence the Government or public opinion, management would be rather feckless without the trade association.

A list of criteria for joining and a compilation of trade groups are among the features of this volume. From his lengthy experience in trade association work, the author indeed has much to offer any management man who would like to add "know-where" and "know-whom" to the now bromidic "know-how."

Getting Personnel

HUMAN RELATIONS IN ADMINISTRATION, by Robert Dubin. Prentice-Hall, Inc., New York, 573 pages, \$7.35.

American management continues to be faced with the need for greater effort on the personnel front. This has always been obvious, oftentimes painfully so, in respect to labor relations; but now, with the recent recognition of industry as an essentially human institution depending for its success upon the satisfaction of human needs as well as the traditional needs of production and profits, the divers problems associated with personnel management assume a

Everything to accelerate answers - and reduce costs!

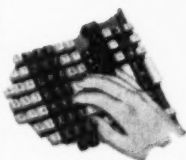
Burroughs Sensimatic

Accounting Machine



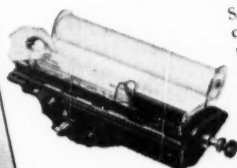
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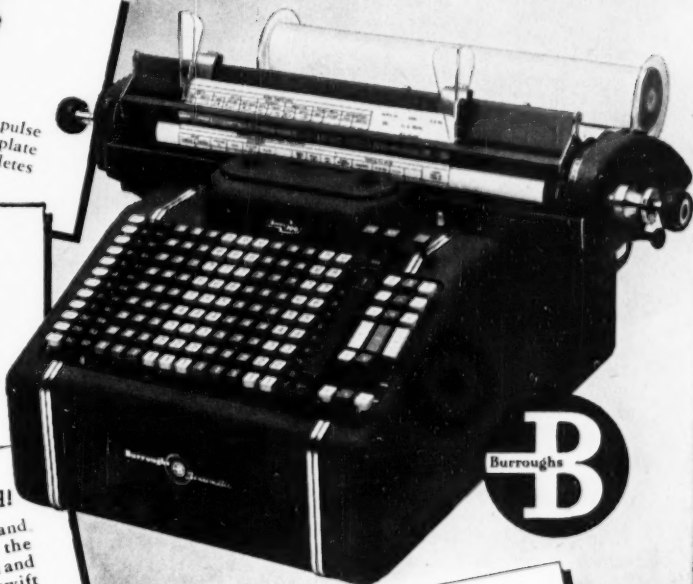
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far subtler dimension in to-day's world.

While the definitive text fully defining this new dimension has yet to be written, the book under consideration comes very close to doing this, given our present state of knowledge. The framework used is organization; pegged to this framework are the numerous essays comprising the study, contributed by personnel authorities in the ranks of business, labor, government, and education—all welded into a living, cohesive whole by Professor Dubin's pertinent commentary and sagacious editing.

Organization, the central topic, is treated from many angles—formal structure, informal allegiances, the questions of authority, bureaucracy, and so on—but always with the assumption that the basis of all organization is people: how they behave together and why. For any department head or manager wishing to benefit from up-to-date knowledge of social behavior, here is a source-book for precedures and ideas covering most every personnel problem.

An added feature is a wide selection of actual cases offering verbatim accounts of problems encountered by a variety of companies as unlike as ordinance plants and advertising agencies.

Strictly Legal

LAW FOR THE SMALL BUSINESS MAN, by Morton L. Leavy. Oceana Publications, New York, 80 pages, \$1.

While legal complexities are the order of the day for large firms and corporations, small businesses have hardly been spared the encroachments of laws, statutes, and similar bothersome paraphernalia. Mr. Leavy, a member of the New York and Federal bar, has compiled a compact reference work specifically designed to deal with the typical legal problems of small companies.

The case approach is used to explain the processes of purchase and sale, incorporation, leasing, insurance, taxes, partnership agreements, and many other legal matters which affect business management. The author's deliberate intention was to avoid theory and to advise solely on "the practical everyday problems which most small business men must inevitably face." In this aim he has admirably succeeded.

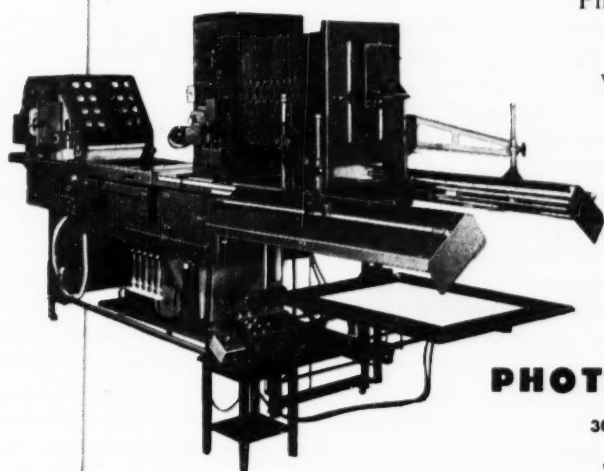
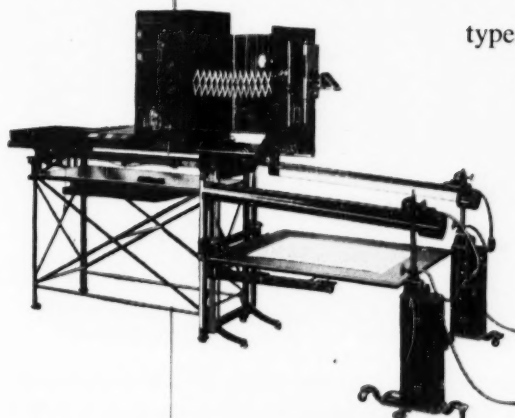
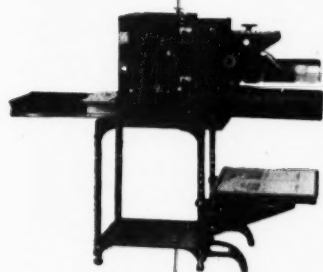
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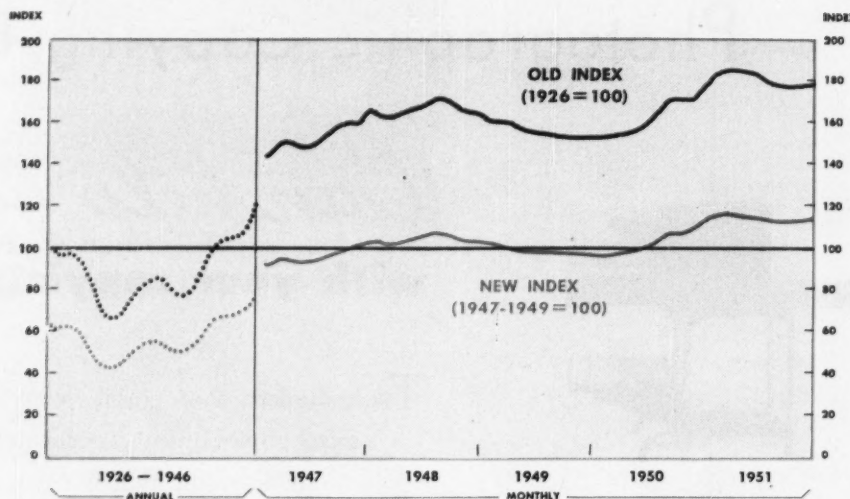
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A Closer Tab on Prices



IT IS ONLY DURING THE YEARS 1947 THROUGH 1951 THAT THE "OLD" AND THE "NEW" SERIES ACTUALLY OVERLAP. OFFICIALLY THERE IS NO OVERLAPPING AS THE BUREAU RECOGNIZES AS OFFICIAL THE "OLD" INDEX THROUGH DECEMBER 1951 AND THE "NEW" INDEX STARTING WITH JANUARY 1952. FOR YEARS PRIOR TO 1947 THE "NEW" INDEX IS DERIVED SIMPLY BY TRANSPOSING THE "OLD" INDEX TO A 1947-1949 BASE.

EDGAR I. EATON

Chief, General Price Research Branch
United States Bureau of Labor Statistics

THE United States Department of Labor's Bureau of Labor Statistics issued a revised wholesale (primary market) price index at the end of February 1952. The widespread use of this index in business and government calls for this discussion of the index and its changes, as well as some evaluation of the way in which the revision has affected its use.

This index is the oldest continuous statistical series put out by the Bureau, and it is one of the oldest non-fiscal series put out by the Federal Government. The index was originally established by the United States Senate. In response to a resolution of the Senate in 1891, the Committee on Finance under the chairmanship of Senator Nelson Aldrich made an investigation of the

effects of the tariff laws "upon the imports and exports, the growth, development, production, and prices of agricultural and manufactured articles, at home and abroad."

The results of this investigation were incorporated in the report of the Committee (now called the Aldrich Report) and were the first index of primary market prices in the United States, and probably the first official index of this type in the world. The function of continuing this work was assigned to the predecessor of the current Bureau of Labor Statistics; there it has been maintained as a continuous series since 1890.

Both the form and the content of the index have gone through many changes since the original work of the Aldrich Committee, but these have been changes in degree rather than in basic concept and purpose. Funda-

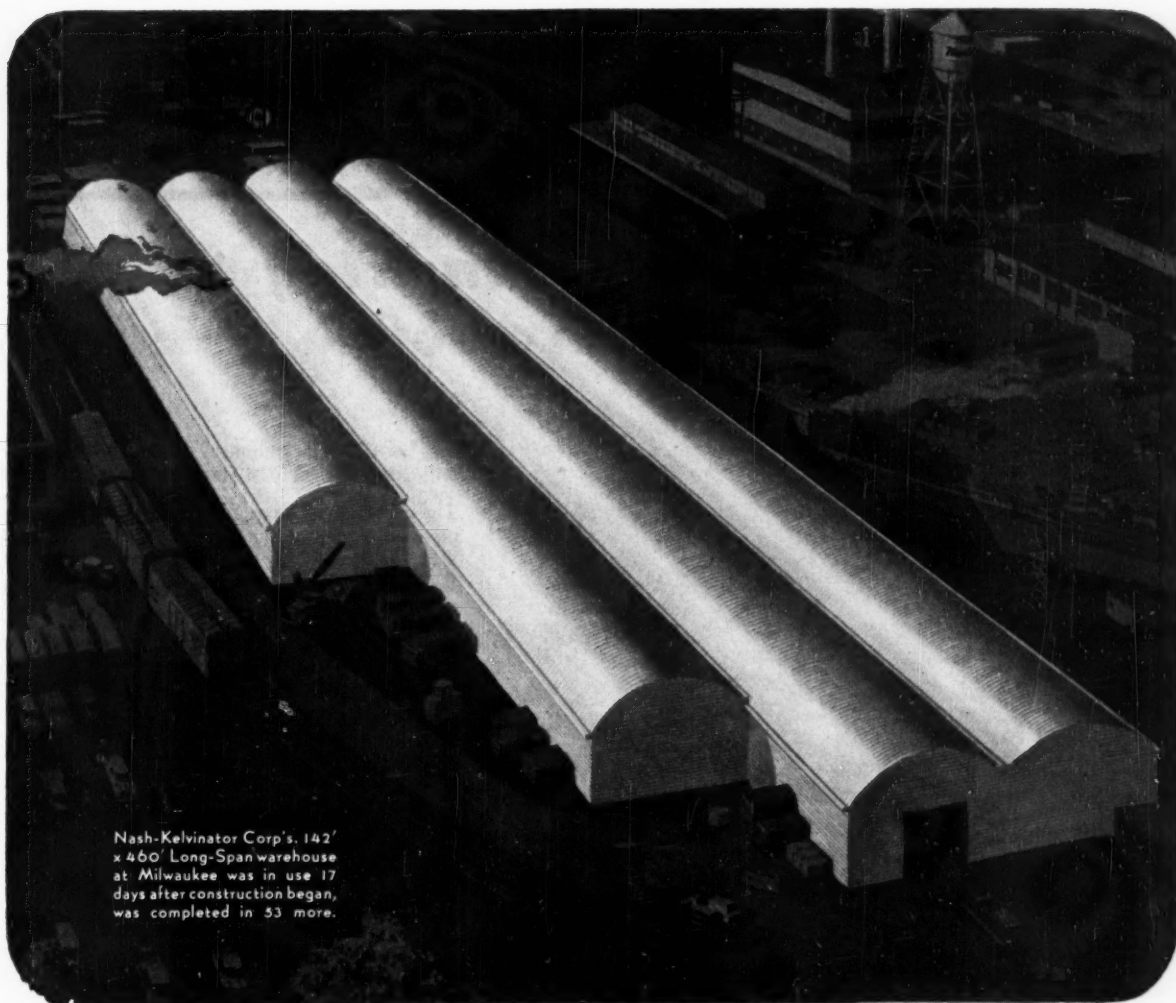
mentally, despite limitations and qualifications, the index has been used as a measure of the change in the value of the dollar in primary markets and, therefore, as an indicator of the general trend of the American economy.

The growth of the index has been marked by its improvement and refinement as a measure of this phenomenon both in technical construction and in the supplying of additional detail to allow for more extensive measurements of smaller sections of the economy.

"Wholesale" as used in the title of the index refers to sales in large lots, not to the prices received or paid by wholesalers, distributors, or jobbers. The prices used in constructing the index are those which apply at primary market levels—that is, the first important transaction for each commodity.

Most of the quotations are the sell-

Continued on page 50



Nash-Kelvinator Corp's 142' x 460' Long-Span warehouse at Milwaukee was in use 17 days after construction began, was completed in 53 more.

For every industrial use . . .

the new **LONG-SPAN MULTIPLE**

YOUR best bet for industrial plant expansion! That's the new, all-steel Long-Span Multiple, the building designed and engineered for maximum industrial efficiency.

The Long-Span Multiple gives an amount of usable, unobstructed interior space hitherto unavailable with mass-produced, prefabricated buildings. Its unique column arrangement provides ample room for modern industrial equipment, complete palletization, and production lines. Its arch roof gives unusual height advantages for low-cost installation of boilers, presses, other tall equipment.

The Long-Span Multiple is easily and economically insulated, skylighted, ventilated. Size is adaptable to any lot or use requirement. Ribs and trusses are of N-A-X HIGH TENSILE steel for long life, strength and economy. It goes up in weeks instead of months.

Long-Span Multiples are available now to solve your individual expansion problem. Write, wire or phone for complete information on this latest addition to the famous Quonset® line.

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15- or 18-Ft. Interior Clearance
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Yes, I would like to know more about the new Long-Span Multiple.

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Celanese

*marking 27 years
of*



A copy of the Annual Report for 1951 will be sent on request without charge. Please address Dept. 148.

The year's operations: Over a period of years we have expanded our domestic plant capacity to meet the growing requirements of the textile industry in the United States. With the completion of our acetate staple fiber unit at our Celriver plant, we believe we will have made adequate provision for the requirements of the textile industry for the foreseeable future.

As a result of the increasing demand for chemicals, construction was started on a new petro-chemical plant near Pampa, Texas.

Petrocel Corporation, a subsidiary, was formed to carry on oil and gas exploration and development work, with a geological and explorations office at Corpus Christi, Texas. This was another step in our long-range program designed to augment, rather than replace, existing sources of the basic raw materials used by our Company.

Through our chemical operations in the United States and through our affiliates in Canada we are rapidly approaching our goal, which is the assurance of basic raw materials for the manufacture of our principal products—acetate yarn and staple fiber.

Sales, earnings and dividends: Sales for the year amounted to \$202,651,014, compared with \$232,483,942 in 1950 and \$171,292,005 in 1949. Earn-

ings for the year amounted to \$24,800,263, compared with \$40,361,166 in 1950 and \$20,640,826 in 1949.

The earnings per share of Common Stock, based on the number of shares outstanding at each year-end and after providing for Preferred Stock Dividends, were \$3.56, compared with \$6.38 in 1950 and \$3.19 per share in 1949.

A quarterly dividend rate of 75¢ per share on the Common Stock was paid throughout the year. This amounted to \$17,534,862 on the 5,844,954 shares of Common Stock outstanding. The dividends on the Preferred Stocks amounted to \$4,005,551. The total payments for dividends in 1951 were \$21,540,413, compared with \$17,093,288 paid in 1950. This was a record disbursement for the Company.

Taxes: Provision for Federal taxes on income and excess profits tax for the year amounted to \$27,250,000, compared with provision for taxes in 1950 of \$41,000,000 and \$13,000,000 in 1949.

Compared with earnings of \$3.56 per share on the Common Stock, and dividends of \$3.00 per share paid on the Common Stock, the total direct taxes paid by the Company to Federal, State and Local Governments were equal to \$5.47 per share of the Common Stock.

Financial position: At the end of the year net current assets amounted to \$102,757,948 against \$80,683,298 a year earlier. Cash with banks and on hand, including Government securities, aggregated \$58,683,399, compared with \$61,682,887 at the close of 1950.

During 1951 the Company took a series of steps to consolidate and simplify its capital structure. These financings revised the Company's financial structure so that at the end of the year there were outstanding \$101,188,000 of funded debt; 1,000,000 shares of Preferred Stock, Series A, 4½%; 34,163 shares of 7% Second Preferred Stock (after deducting 1,545 shares held in treasury); and 5,844,954 shares of Common Stock.

C E L A N E S E

C H E M I C A L S • C H E M I C A L Y A R N S A N D

Reports on 1951

of growth and progress **Celanese Corporation of America**

Canadian companies: Columbia Cellulose Company, Limited, completed the first phase of its plant construction at Prince Rupert, British Columbia. Operations of the pulp plant were commenced in May. Production has been on an increasing scale, with the difficulties usually encountered in the start-up of a new plant gradually being overcome. At the outset the major emphasis was placed on training employees in their duties.

Engineering work is proceeding on the second phase of construction which will increase the plant's capacity to 300 tons a day. As the full volume of production is realized, the output of this plant should be a constructive factor in alleviating the continuing world-wide shortage of cellulose.

Construction of the petro-chemical plant and chemical yarn and fiber plant at Edmonton, Alberta, by Canadian Chemical Company, Limited, was well advanced by the year end. The total capital funds arranged for are \$20,000,000 in the form of Capital Stock and \$43,000,000 in the form of bonds.

The Edmonton plant will produce a variety of industrial chemicals some of which will be used at the plant in the manufacture of cellulose acetate, acetate staple fiber and filament yarns. In addition to such volume as is consumed in the operations of the plant, it is planned to market chemicals and cellulose acetate in Canada and foreign countries. The staple fiber and filament yarns will be sold principally to the Canadian textile industry.

Plans of the Celgar Development Company, Limited, which were announced immediately following the end of the year, for an integrated forest industry in the Arrow Lakes district of British Columbia, constitute the third phase of the Canadian development program which was initiated four years ago. The development, which is expected to provide employment for 2,000 persons in the mill and logging operations, is estimated to cost \$65,000,000, but this amount may be increased by the addition of plywood and board mills.

Mexican and South American affiliates: Both Celanese Mexicana, S.A. and Viscosa Mexicana, S.A., two of our affiliates in Mexico, increased their production of acetate and viscose chemical yarns and fibers during the year. Production of viscose staple fiber commenced at the plant of Viscosa Mexicana, S.A. and provided the Mexican textile industry with a supplement to the acetate staple fiber produced by Celanese Mexicana, S.A. Production of chemical yarn and fibers will be further increased during 1952 by both companies.

Celulosa Nacional, S.A., another affiliate, has completed construction of its cellulose plant at Rio Bravo in the State of Tamaulipas and has now begun production. The plant produces high alpha cellulose from raw cotton linters obtained from Mexican cotton.

Another affiliate, Claracel, S.A., was formed during the year for the manufacture of acetate film for packaging and wrapping purposes. Equipment was installed in a modernized building in Mexico City, with production scheduled to start shortly.

In South America, the construction of the acetate filament yarn plant of Celanese Colombiana, S.A., at Yumbo, near Cali, Colombia, was completed in record time despite difficulties of construction due to the distances involved in shipment of equipment. The plant was constructed and put in operation in less than twelve months. Steps already have been taken to increase substantially the initial capacity of the plant and to provide for production of staple fiber.

During the year Celanese Venezolana, S.A. was formed and financed jointly by our Company and Venezuelan investors, many of whom are leaders in the textile industry of that country. Construction on the plant near Valencia was started late in 1951 and is proceeding rapidly. Plans are also under way for the production of viscose filament yarn and staple fiber.

*... From the President's Report, in the
1951 Annual Report to Stockholders*

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ing prices of representative manufacturers or producers, or are prices quoted on organized exchanges or markets. The index does not include the prices of retail transactions, transactions for services (including the construction of finished structures or printing and publishing), real estate, transportation, securities, or items which are not reproduced on a repetitive basis.

For a Clearer Reflection

The index is a measure of price change as it actually*occurs in our current economy; therefore, it may include prices of some items at many stages of production and distribution, depending on the organization and selling practice of the industry. For example, cotton is priced as raw cotton, as yarn, as basic fabrics like gray goods and print cloth, and as finished prod-



ANDERSON PHOTOGRAPH FROM DEVANEY

ucts like shirts and sheets. In the case of some highly integrated industries, like steel and aluminum, only the final finished products may be in the index. In short, the index measures changes in the prices charged for sales on the open market.

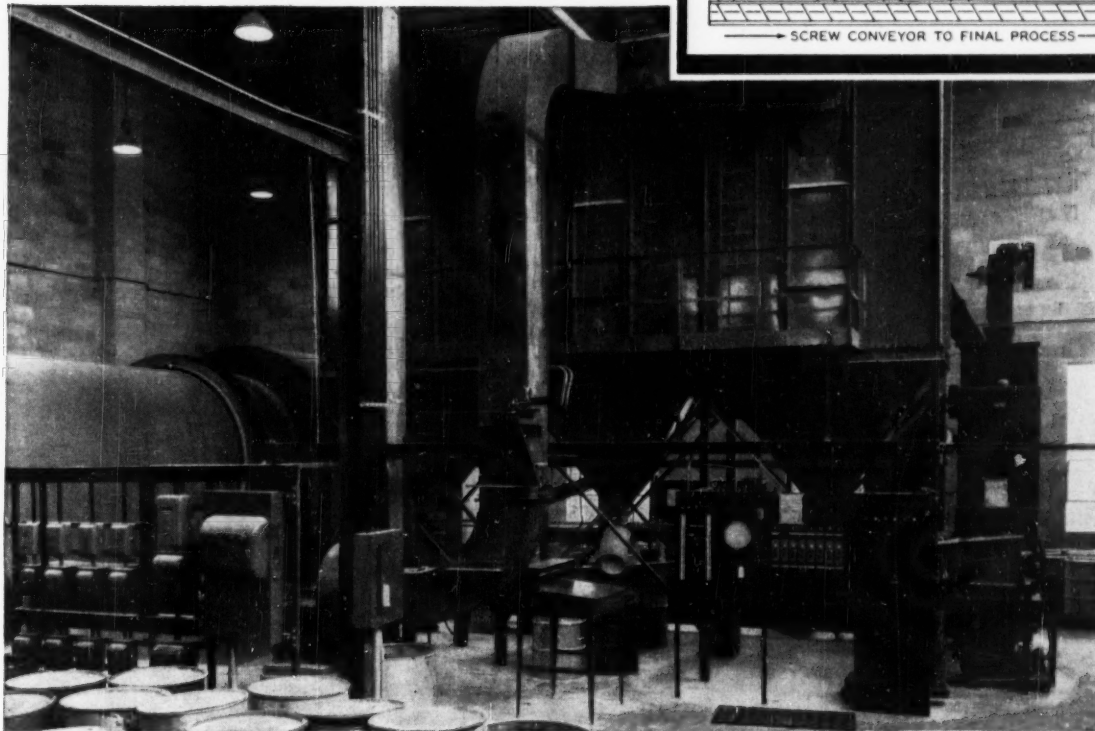
The index has three main uses.

First, as the measure of price movements at other than the retail level, it is one important indicator of the tone of the economy. Under our system of free enterprise, price movements are the barometer of the pressure of forces acting in and on the economy. The measurement of prices, therefore, is an important tool for all those who have occasion to perform economic analysis. The index is widely used by business and by the economic advisors to the administration in setting policies, measuring their effectiveness, and in the administration of such policies.

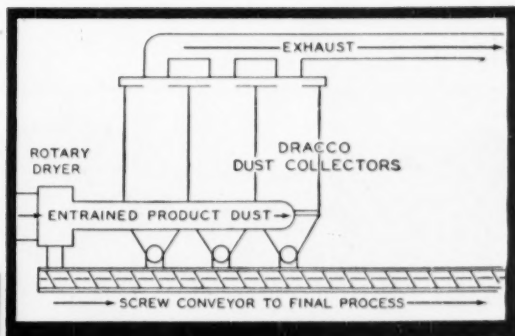
Second, the index is used as a meas-

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TO GAMBLE...



Dracco Filter (center) at Ferro's Bedford plant recovers all napalm entrained in hot air exhaust from rotary drier (left). Diagram indicates how recovered material is discharged to screw conveyor, which moves all napalm to final processing.



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The Ferro Corporation knows that today's industrial conditions with their high costs and accelerated production demands make peak-efficiency operation a must!

At its Bedford (Ohio) napalm manufacturing plant, Ferro is using Dracco Dust Control Equipment, which assures high efficiency by recovering 1% to 5% of the napalm processed.

Napalm is used to make jellied gasoline for fire bombs and flame throwers, and during processing, it is dried in a huge rotary drier with a blast of 320° F. air. This blast entrains fine napalm dust, which would be lost except for the reclaiming action of Dracco Equipment.

The dusty air is exhausted from the drier through a Dracco Multi-Bag Filter which re-

covers all the entrained material. The result is that none of the product is lost and Ferro's plant and surrounding areas are kept clean.

This is typical of many installations in which Dracco Dust Control Equipment guarantees top-efficiency production. Why not investigate the application of Dracco Equipment and Dracco techniques to your dust control problem?

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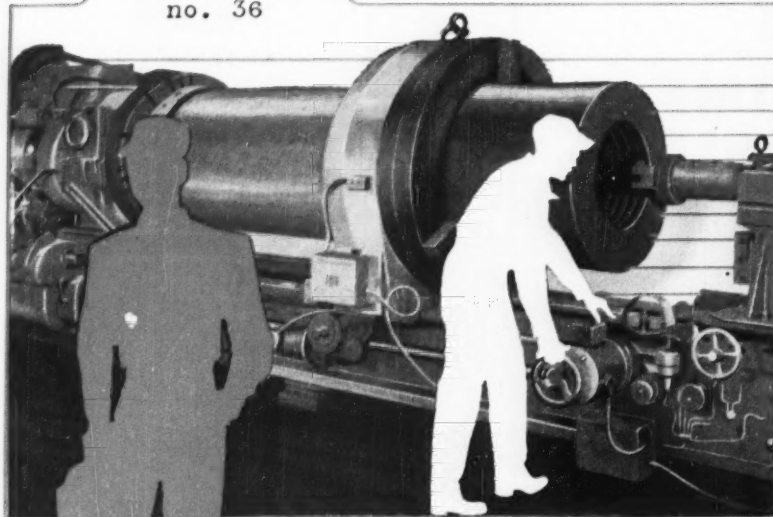
For specific information on Dracco "Performance-Proved" Equipment, contact your nearest Dracco representative or write Dept. D-4, Cleveland 5, O.

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Case history
no. 36



"The Case of the Wandering Machinist!"

the answer to another actual plant location problem

Many companies today face the serious problem of skilled labor turnover involving the loss of men to competing industries, men specially trained at considerable time and expense. As demand for skilled labor increases in heavily industrialized areas all over the country, more and more companies are finding that these "wandering machinists" cost a lot of money in "breaking in" costs and loss of production.

C&O Industrial Development Department surveys show that for many companies, the answer to this problem can be found in plant sites in small, up-and-coming communities in C&O's Center of Opportunity. Here, right next door to major markets, with adequate labor supply, favorable taxes and first class transportation, these companies can build their future and the future of their employees as vital parts of one of these communities.

C&O's "Pin Point" surveys are strictly confidential

Finding the right spot for your new plant can be a costly, time-consuming job for you and your organization. Let our experts in this field make the task easy by preparing a special PIN-POINT survey to meet your requirements. For further information, write Chesapeake & Ohio, Industrial Development Department, Terminal Tower Building, Cleveland 1, Ohio.

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ure of the purchasing power of the dollar excluding retail, where the Consumers' Price Index of the Bureau is the measure. It is, therefore, a key factor in the periodic adjustment or escalation of many long-term purchase or rental agreements. There is no way of measuring the importance of this index in contract escalation, but each day brings new examples of its use. The ways in which the index is used for escalation seem to fall into two types.

Two Uses for Escalation

One type is when specific segments of the index (frequently coupled with the Bureau's series on wages or earnings in specific industries) are used to adjust for changes in the prices of the raw and semi-finished materials which go into the construction of a finished product which must be produced or constructed over a period of time.

For example, the construction of a cargo vessel takes many months, and with rapidly changing prices, it is not possible to establish a final delivery price when construction starts. Therefore, a contract for a ship might well contain provisions like these: "The base price of this vessel, \$X, shall be adjusted as follows: 40 per cent of the base price will be increased or decreased by the change in the Bureau of Labor Statistics' index of wholesale prices for Metals and Metal Products between the date of this contract and the final delivery date; an additional 40 per cent will be similarly changed in accordance with the change in wage rates as measured by the Bureau of Labor Statistics' series of hourly earnings of workers in shipyards." This provision is an attempt to protect both parties against a change in the prices of materials, some of which may not be purchased for many months, and in wage rates, by the use of unbiased or neutral data.

In any individual case the index may not be a highly precise measure of the change in the prices of the specific materials entering the final product. But even a rough measure is frequently superior to attempts to agree on a final price after the completion of the project, or to go through a constant series of negotiations during production.

The high degree of competition in

Continued on page 56

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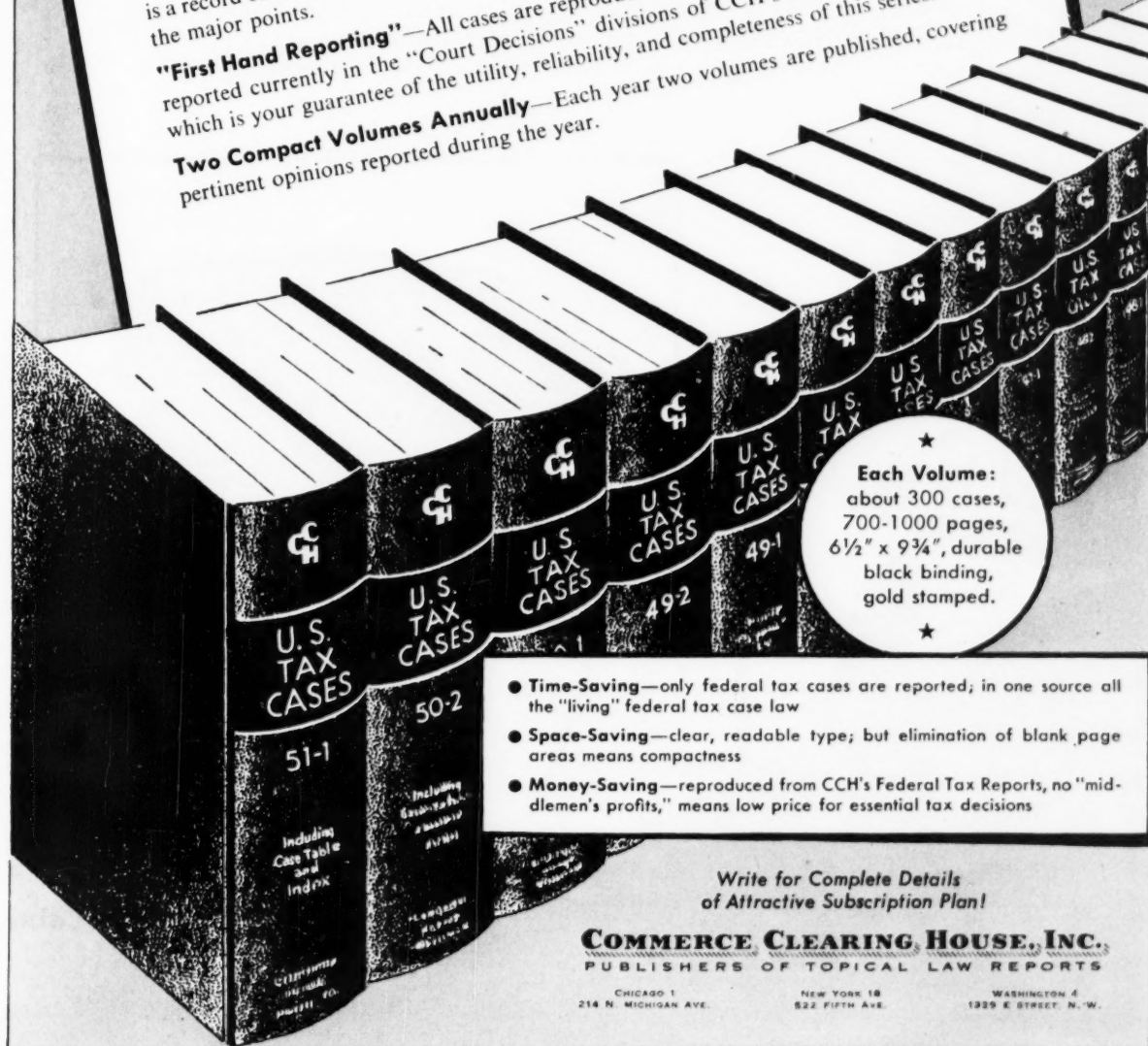
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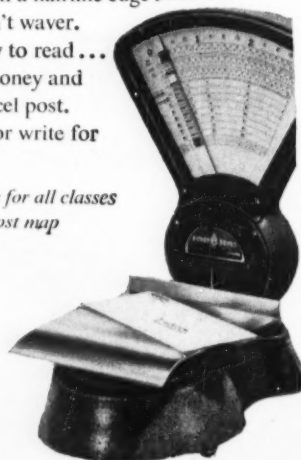
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the American economy, the extent to which various materials can be substituted for each other depending upon price differentials, and the fact that markets are generally open to public inspection or knowledge, all work toward creating a general price pattern. Most commodities, among broad groupings at least, seem to follow both the same trends and short-time movements within reasonable limits. That is, one basic metal does not move far out of line from the average of all other metals for very long; similarly the various fabrics and fibers, chemicals, woods, and other such products are all competitive to a degree.

Broad Application

Therefore, the use of a general or broad index like the Bureau's wholesale price index, even though it may not actually contain the price of the specific materials that enter into the final product being escalated may be a perfectly satisfactory measure of specific price trends.

The second type is where the index is used as a means of stabilizing the purchasing power of the business dollar in a long-term contract—for example, the long-term lease for business, industrial, or commercial property; a royalty or patent licensing agreement; or the continuous delivery of a commodity or service such as natural gas or electric power. In these contracts, the base price is established, and is then adjusted periodically by the changes in the index.

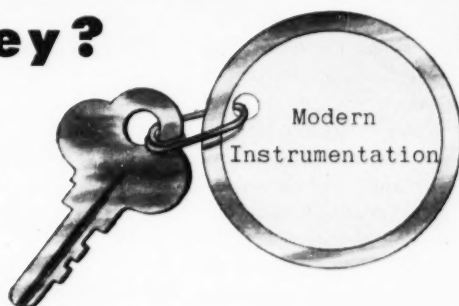
Frequently these changes are restricted to pre-determined limits, such that a rise or fall in the price above a certain amount opens the way for a complete renegotiation of the contract. Or it might be agreed that the price will only be adjusted when the index moves a certain number of points or a certain per cent.

In almost all such contracts, the parties do not use one of the segments of the index, such as Metals and Metal Products, but instead use the total index (All Commodities) or All Commodities other than Farm Products and Processed Foods. Since the purpose is to stabilize the purchasing power of the business dollar, the use of an individual segment would not be



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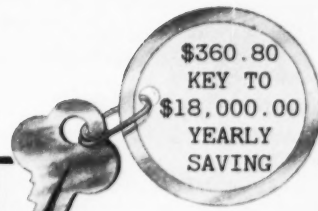
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correct. The use of the index protects both parties against either sudden or creeping inflation or deflation.

Again, in any individual case, the index may not be exact, since purchasing power must be defined in terms of the commodities and services bought with the dollar. That is, the use of a total index to stabilize the dollar for a concern that buys only raw fibers, organic chemicals, and machinery might be questionable, since the total index includes among other commodities all farm products, foods, lumber, basic metals and products, and textiles.

Comparability of Indexes

However, the same reasoning that applied to the adjustment of raw material prices, applies with even greater validity to the use of a total index. Individual vagaries are offsetting, and the net is more reliable than any of its components. A demonstration of this can be seen in the comparison of the former and present indexes. Despite drastic changes in the number of commodities and the way in which they are combined, both indexes show almost exactly the same pattern of movement between 1947 and 1951, the period when both indexes were computed and one of most active price movements. Similarly, the Bureau computes a highly accurate estimate of the movement of the total index by using the prices of only about one-tenth of the commodities included in the total index. There is very clearly a general price pattern, and the index measures this with a high degree of reliability.

The third main use of the index is

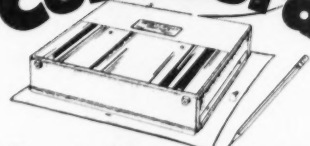
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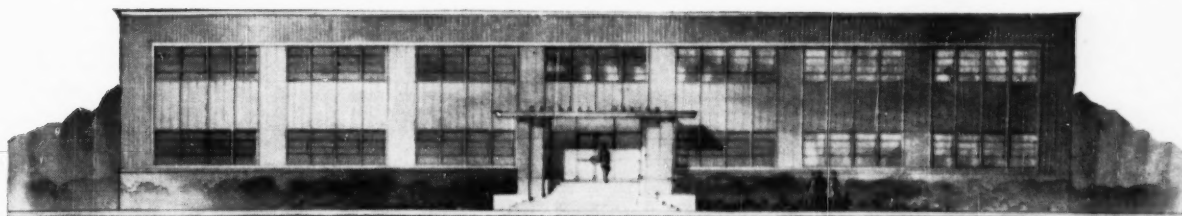
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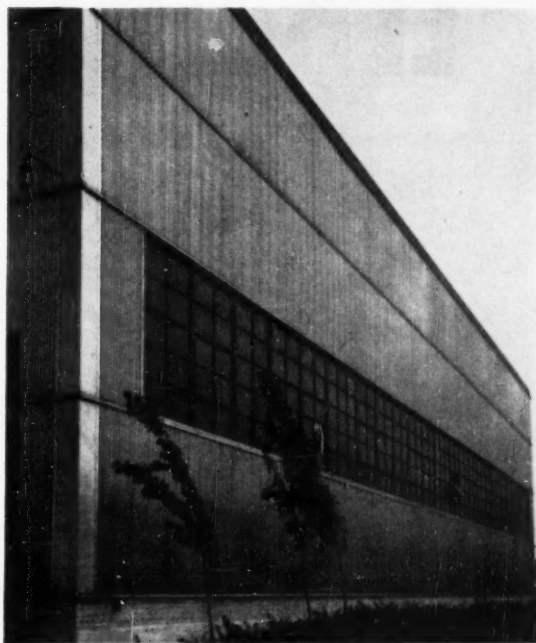
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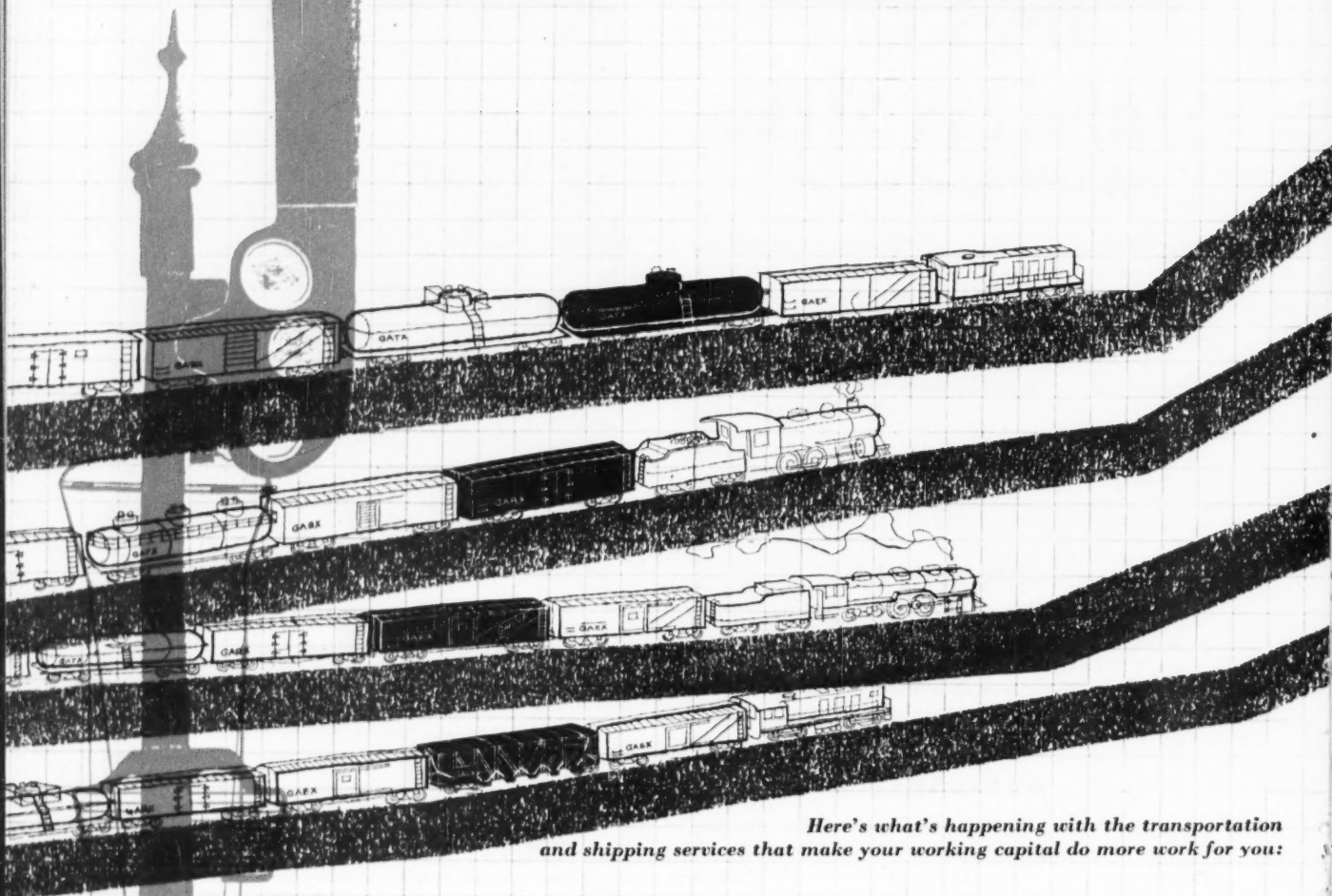
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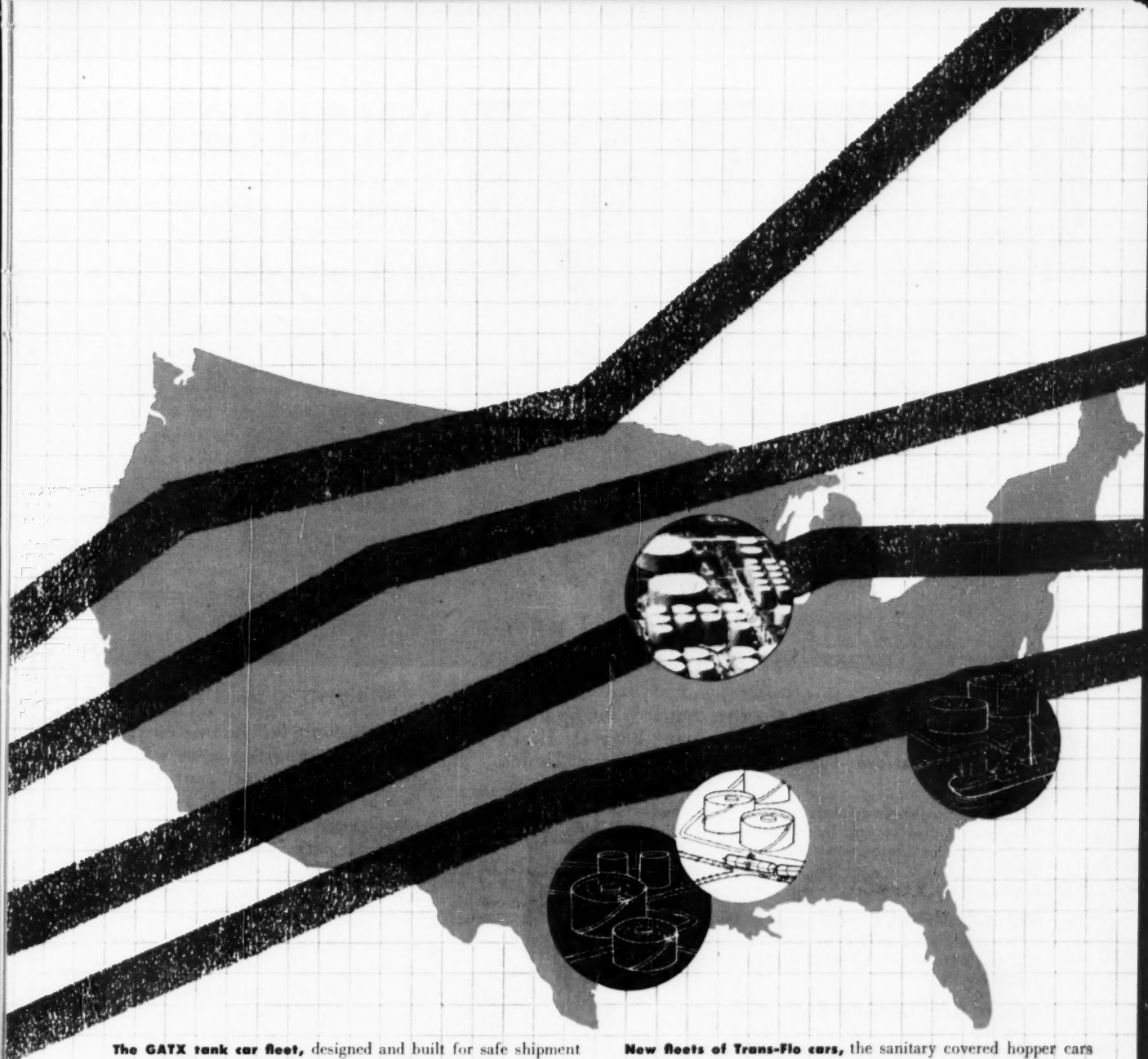
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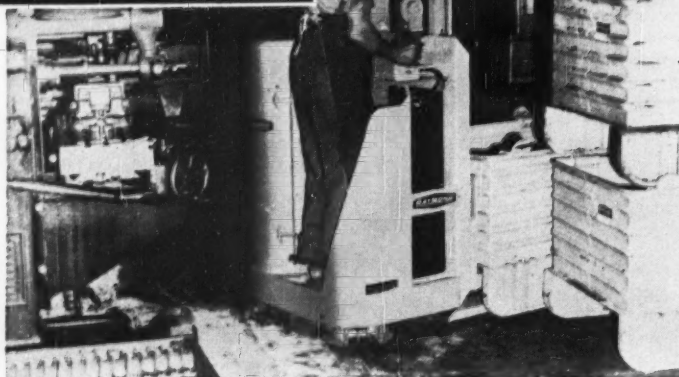
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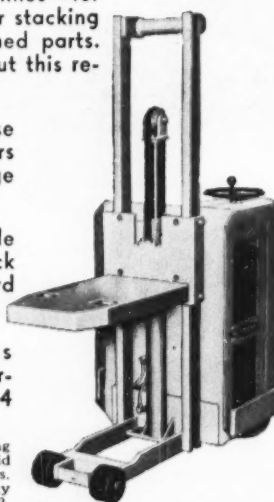
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by buyers and sellers of commodities—purchasing agents and sales managers. In most of these instances, it is not the total index, but rather, the breakdowns and even the individual price series which are employed. Buyers of commodities are able to check both the amounts which they pay for goods and the general movement of their prices against the index.

For example, if the Bureau reports a price of \$20 for a certain type of product as a national average figure, the buyer who is quoted a price of \$30 will obviously question his quotation and want to know the reasons for the difference. Frequently, of course, there is a very good reason for the difference—for example the Bureau may be reporting an f.o.b. producer's plant price for carlot quantities, whereas the buyer may be getting only a small quantity and is paying for delivery.

Room for Question

Similarly, if BLS reports that the general trend of "widget" prices has been an increase of 5 per cent over the past year, the purchasing agent who is quoted a price 10 per cent higher than he paid a year ago has a basis for questioning the amount of the advance.

On the reverse of the coin, there is the seller of commodities. The seller, by use of the index data, can check his absolute level against the market average. Each seller, of course, is aware of his particular competition, but he may not be able to judge whether a certain competitive quote is symbolic of the industry or just an individual deal. The seller can also check his trend against the general industry trend—whether he is too slow or too fast in adjusting his prices.

The index, as a measure of general and specific price trends, is also widely used in budget making and review, both in government and in industry; planning the cost of plant expansion programs; in appraising inventories; in establishing replacement costs; and in a host of other ways. The index is sometimes used in LIFO accounting.

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What are the differences between the old and the revised index, and do they make the index a better tool for business and government to fit the purposes described above? Obviously, since the Bureau had all these purposes in mind when we revised the index, we think it is a better tool, but the facts are presented for open inspection.

There were many changes between the old and new indexes, but two of these are most evident to the casual user and observer.

Different Base Periods

First, the base period (the "100" line) for the index has been brought up from 1926 to the 1947-1949 average. Since the general level of primary market prices in the 1947-1949 period was about 65 per cent above that of 1926, the shift in the base period means a decline in the index of about one-third. Prices in December 1951 were about 80 per



LUOMA PHOTOGRAPH FROM MONKMEYER

cent above 1926 but only about 15 per cent above the 1947-1949 average, so the revised index is about 115 rather than 180.

However, we can not state too emphatically that the use of any particular year or series of years as a base period for calculating an index does not imply "normality" for that period. The base period of an index is merely a convenient reference point, and the movement of the index between any two dates is not influenced by the choice of a specific calculation base period.

Second, the number of commodities in the index has been more than doubled (from 900 to 1800) and the classification scheme for these com-

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modities has been greatly expanded (from 60 breakdowns to about 350 breakdowns). The increase in the number of commodities and the more detailed classification does not affect the user of the summary index. It does make possible a much more detailed study of the economic climate by industry, and it improves the use of components of the index for materials escalation. It also simplifies the task of the purchasing agent and the sales manager in checking their prices against the national average.

New Items Included

The major additions in the number of commodities were in the areas of manufactured goods rather than raw or semi-processed materials. Now in the index, for the first time, are such commodities as construction and mining machinery, metal working equipment, electrical machinery, general purchasing and equipment, and apparel of all types. Also included are those goods which did not appear in volume in the economy until after World War II—television, antibiotics.

During the revision the Bureau also eliminated or greatly reduced the importance of many obsolete items or commodities which are no longer important in the domestic economy. The development of the continuous rolling process in steel mills, for example, has greatly reduced the importance of merchant steel bars in our economy; synthetic fibers have almost eliminated silk yarns; and similar developments have changed the importance of other goods.

All told, the number of commodities has been increased from approximately 900 in the former index to more than 1800 in the new index; the 1800 commodities in turn are based on about 5000 separate price reports. In the old index, the product of the prices times their quantity weights in 1951 was about \$80 billion; in the revised index, the total is over \$200 billion.

In addition to the two changes which are apparent on the surface of the index, several internal changes were also made. The weights used in combining the individual price series in the revised index are based on the value of total transactions including imports in all primary markets in the United

"DOODLES^{*} in the Air!"



* "DOODLES in the Air" are unobserved WASTE MOTIONS . . . extra manipulation of hands and equipment. Invisible red tape that snarls production and leaves a trail of errors, annoyance and fatigue.



Wasteful! Unheard of!

No "doodling" among sky-writers—that's for sure! The slightest deviation would be noticed immediately.

However, wasteful "doodles in the air" in record-keeping are unavoidable with poorly designed or outmoded business forms. Our scientific tracer light studies reveal these otherwise invisible waste motions . . . show how they can be eliminated by our "Planned Business Forms." Let us plan improved forms for you . . . to gain better control, save your time, increase your production and your profits.

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D

Should Your Company start a Pension Program NOW?

We can't answer that question for you, of course.

But we do know that present tax laws and recent rulings of the Wage Stabilization Board in regard to company contributions, make this a particularly advantageous time to begin a qualified pension plan. Why?

- Because company contributions are tax deductible . . .
- Because the income earned by such a plan is tax-free . . .
- Because a dollar deposited in a pension fund buys a full dollar's worth of benefits—while the same dollar in profit might be worth only 18¢ after taxes . . .
- Because employees pay no tax on benefits until they begin receiving them . . .
- Because "past-service" costs may be heaviest during the first 10 years of a fund's operation, and high tax periods are ideal for amortizing them . . .
- Because employee benefit plans are becoming more and more essential in securing an adequate working staff.

So if you've been thinking of starting a pension plan yourself—but don't know quite where to begin—perhaps we can help.

Not that we're pension plan experts . . . or trust fund administrators either.

But over the years, we have worked pretty closely with both and acquired some understanding of basic fundamentals, which we have just summarized in our new booklet, "Private Pension Funds".

If you think this booklet might be helpful to you, we'll be happy to mail a copy—with no charge, of course. Simply address—

Pension Fund Department P

**MERRILL LYNCH,
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Offices in 97 Cities

States in 1947. The weights used in the former index were based on sales in the years 1929 and 1931, for the most part, and were not as inclusive as in the revised index. The weights, or relative importances of the individual commodities in the revised index, therefore, represent current marketing patterns rather than those that existed in the late 1920's.

Additional Revisions

Other changes in the index during the revision program included changing pricing levels for certain commodities, modification of individual specifications to fit current markets, elimination of all excise taxes, and the shift of pricing to an f.o.b. producer's plant except in a few instances where it is the custom of the industry to quote on a delivered basis. In the former index, these policies were followed in general, but not as consistently as now.

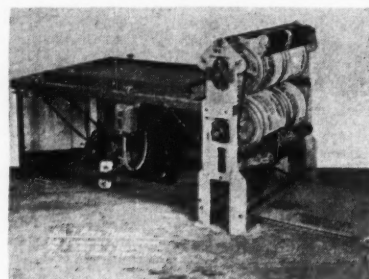
The shift in the level of the index as well as the modified classification has raised some problems in the use of the index in escalating industrial contracts. The Bureau has issued a statement presenting a solution to the more common types of problems, has had experts discuss the problem in major cities throughout the country, and is ready to offer technical advice on the details of specific cases upon request.

During the revision program the Bureau worked out a very effective liaison with important trade associations and manufacturing groups to find out what was needed by business, how the data could be obtained, and how the various needs could be balanced against each other within the framework of the



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I-30



A request on your letterhead will bring you a reproduction of Whistler's Black Lion Wharf, one of his best etchings, suitable for framing.

A Triumph of Persistence

As a painter and etcher, James McNeill Whistler was one of the most original and controversial artists of the nineteenth century. Realist, idealist, impressionist, cubist, futurist—none of the terms describes him or even suggests his work.

Whistler cared nothing about classicism or romanticism, nothing about sentiment, feeling or action. The dramatic, the illustrative bored him. The decorative, rather than the realistic, was his view of what art should be.

For forty years, a perverse public reviled him; he was scoffed at, lampooned. Then, after

his death, his pictures were widely acclaimed. Forgiven were his sharp barbs, his caustic wit. The public, belatedly, recognized the genius of Whistler, appreciated at last the rare decorative beauty of his work. His persistence in his own point of view was finally vindicated.

Persistence in manufacturing, too, brings its own rewards. An unswerving determination to build a better product pays rich dividends in customer relations, as Peerless has found out over the years.

Peerless
Tube Company



BLOOMFIELD, NEW JERSEY



**"MR. BOTT,
DON'T BLAME ME!
IT'S THE SYSTEM"**

This employer of the gay nineties is impatient with his bookkeeping methods. He wants monthly reports of his business and because they are slow in reaching his desk, he is taking it out on his employee.

PITY THE MAN . . .

The poor bookkeeper is trying to explain that it all takes time . . . that another man could work no faster, could do no more in ten hours than he does . . . that the system is slow.

In those days, bills were all figured mentally and written in ink. Entries were made by hand in bound journals and ledgers, and every figure had to be double checked for accuracy.

Invoices for merchandise purchased, bank statements, freight bills—all were many days late in arriving, because other offices followed the same slow procedures.

How different for Mr. Bott, had he lived today. He would have enjoyed rapid mechanical accounting methods, with Tarco efficiency forms in Tarco flexible-chain post binders. He would know the status of his business not every month or every week, but *every day*.

If you are not familiar with the Tarco line, send for illustrated catalog listing 240 different forms, also binders and other auditing aids. Then—should you require special forms, we custom-print them to your exact specifications.

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Consult your Public Accountant about
the best Forms for your Business.

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total index. The associations, groups, and individual producers that were consulted, devoted countless hours of top executive time to the revision.

In addition to the advice and the counsel of special industry groups, the Bureau also had the benefit of the advice of several committees on major-policy decisions. These committees included a special technical committee appointed by the American Statistical Association, and a Business Research Advisory Committee representing business as a whole rather than specific segments. The Bureau also received much advice from groups within government and from labor organizations.

How It Is Compiled

The wide use of this index, and the faith with which it is accepted in settling the dollar values of contracts, make relevant a brief discussion of the way in which it is put together. Essentially, the index is based on a program of volunteer co-operation by thousands of manufacturers, big and small, all over the nation.

These manufacturers, upon the request of the Bureau, help draw up very detailed specifications for each article priced. Each is described in complete detail including the manufacturer's number or trade name, the minimum and maximum quantity brackets of sale, the class of buyer, the delivery point (or plant), and the discounts involved. After each article is specified, the producers fill out a confidential schedule each month giving the price of the article and, if any change has occurred in the specifications since the last monthly report, full details of these changes.

This program is strictly voluntary, and the Bureau has always avoided any attempt to give it the authority to require compulsory reporting. The Bureau, in turn, guards its price records for individual producers with a jealous eye, and under no condition will it release any information which could possibly be used to determine the price of an individual manufacturer.

Average prices are never published when there are less than three companies reporting to the Bureau; in such cases, the Bureau will publish individual price index (or price relatives) which show the trend of prices, but not the

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LOST MOTION,
DISAPPOINTMENT,

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In dealing with us, you are assured meticulously conducted negotiations, sympathetic understanding of your problems and a fair purchase price. We have been actively buying and operating companies of substantial size for many, many years.

We have ample financial resources; always pay all cash. We are principals (not brokers), and purchases are always made for our own account. We prefer to retain existing management and personnel. If your situation involves a \$250,000 to \$5,000,000 purchase price, communicate with us. (Brokers protected.)

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"Shipping Guide."

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level for the item. In some instances, upon the request of the reporters, even price indexes for the items are not published, but the basic data are incorporated in the final index.

The Bureau also uses trade journal quotations when they are generally accepted as reliable indicators of price trends by the industry in question and the Bureau is satisfied that they are accurate and unbiased.

The price reports from the individual producers, markets, and trade journals are obtained each month on so-called "shuttle schedules." These schedules are sent back and forth to the reporter each month so that he can check his previous prices against the current month's report. The prices on the schedules are posted to master records and averaged with the prices of other manufacturers producing the same article.

Check and Review

These are then carefully reviewed by commodity experts to be certain that they make sense in the light of market conditions and that each individual price is in line with the movement of other producers. Any quotation which appears abnormal, unusual, or contrary to the general practise of the individual firm is immediately checked with the reporter to be certain that a clerical error was not made or that there was not some change in specifications which the producer neglected to report.

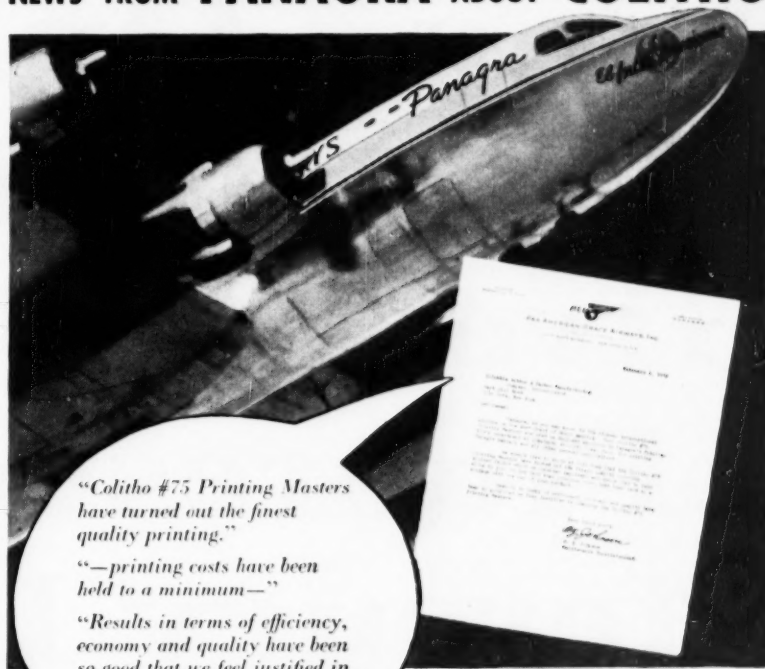
Any change in specifications is handled in such a fashion that it is not allowed to affect the index. The index measures pure price change, not the combination of changes in price and quality or changes in price and the level of sale.

When the prices have been checked and approved by the commodity and index experts, the remaining steps are strictly mechanical. The necessary thousands of calculations are performed on automatic machines and the final report comes out as a machine tape ready for photographic reproduction.

In the case of all its data, but particularly for the two price indexes (this and the Consumers' Price Index), the Bureau has set up relatively elaborate systems to be certain that they cannot

Continued on page 72

NEWS FROM PANAGRA ABOUT COLITHO



"Colitho #75 Printing Masters have turned out the finest quality printing."

"—printing costs have been held to a minimum—"

"Results in terms of efficiency, economy and quality have been so good that we feel justified in praising the Colitho #75 Printing Masters."

People in all kinds of businesses enjoy the happy experiences which Mr. O. Z. Johnson, Maintenance Superintendent for Pan American-Grace Airways, describes in his unsolicited letter. They know because their offset duplicating too, is on the high quality level attainable with Colitho Plates and Colitho Offset Duplicating Supplies.

It's you who have not yet tried Colitho who still have a pleasant surprise coming—and believe Mr. Johnson, if not us—you will be surprised at the clean, neat work and the volume of it you'll get from Colitho Plates.

Colitho Plates were designed universally for all duplicators. They must stand on their own merits and stand they do!

Colitho Plates are easy to prepare—

write, type, print, or draw—and how quick! They require no pre-treatments—no aging—and no pampering. You handle Colitho Plates like an ordinary sheet of paper, yet the work comes out free of smudges and fingermarks. You can even fold and mail them! Long runs, re-runs and long life are Colitho characteristics which result in real economy.

So, find out why Mr. Johnson is so enthusiastic. Mail the coupon for samples and the complete Colitho story. (We'll tell you also how the Colitho "One-Write" idea cuts cost in business systems paper work.)

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Colitho plates and supplies make any offset duplicator a better duplicator.



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Please send me a copy of the Colitho Manual and samples of Colitho Masters.

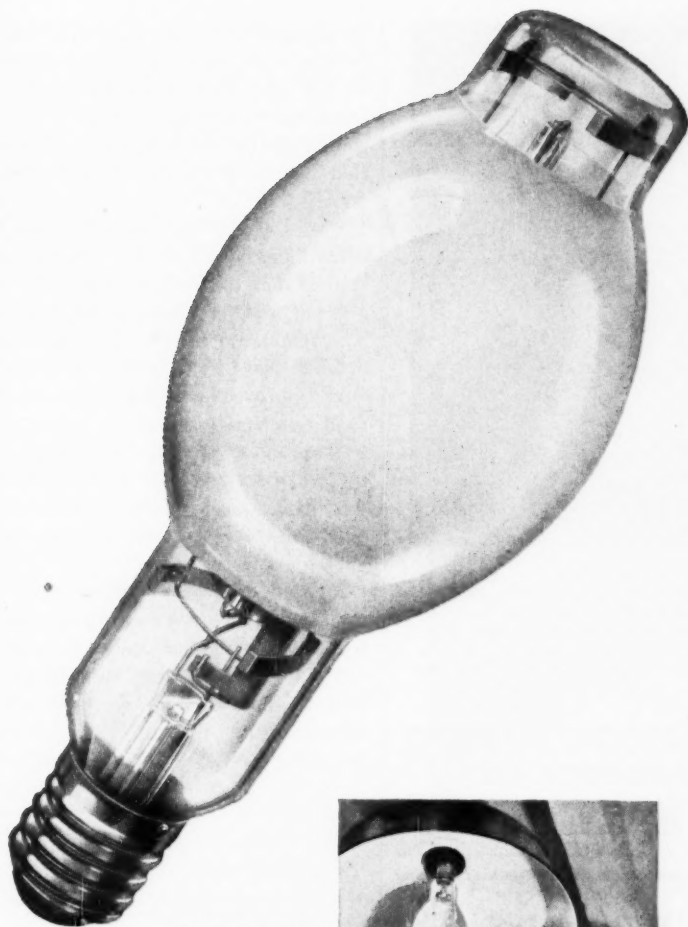
Name _____
Title _____
Company _____
Address _____
City _____ Zone _____ State _____
Make of Duplicator _____ Model _____
Plate Size _____ Clamp Style _____

Now... Only Westinghouse Gives You The Fluorescent Mercury Lamp With Golden- White Light

Here's the biggest lighting news since the introduction of the fluorescent tube! The new Westinghouse 400-watt fluorescent mercury lamp produces a golden-white light suitable for practically all industrial lighting. In addition, the J-H1 has all the important mercury lamp advantages of high light output, top efficiency and long life. You can get complete technical data and practical application information by contacting the Westinghouse Lamp Sales Office nearest you. Or simply mail the coupon below.

YOU CAN BE SURE...IF IT'S

Westinghouse



FOR INDOORS

The J-H1 gives plant interiors golden-white light from standard H-1 sockets; needs no additional equipment other than the usual mercury lamp auxiliaries.



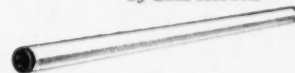
FOR OUTDOORS

The J-H1 is ideal for lighting large areas to combine the efficiency, high light output, and long life of mercury lighting with a whiter light.



NEWS FROM WESTINGHOUSE, THE FASTEST-GROWING LAMP MANUFACTURER

by Sam Hibben



DID YOU KNOW? Though your eyes adjust pretty well to semi-darkness in five to ten minutes—say at the movies—they are not fully adjusted for about thirty minutes or more. At that time your darkness-adapted (scotopic) vision is about 1,000 times as acute as it was during the first few seconds of darkness. The pupillary opening into the eye increases markedly. You may see the flame of a candle as much as 10 miles away.

EFFICIENCY NOTE: A few increases in lamp efficiency have been big jumps, but most are small increases. Steady, patient, thorough technique in details of manufacture is about as important as great inventions. Most people know that the filament in an incandescent lamp is coiled, but how many know that the coil is coiled again? It's as if you wrapped a wire around a nail to get a coil, and then stripped it off and wrapped the coil around a nail again. Surprisingly, this way of conserving heat increases the efficiency of the lamps by about ten percent, and it's a feature of almost all Westinghouse lamps.

DITTO NOTE: To conserve heat, most lamp bulbs are filled with nitrogen gas, or argon, or the rare krypton gas—and it just has to be pure! None of these gases are harmful—they are extracted from clean air—but the science of using them in right proportions is a classic in the records of skilled industry. Each different shape or design of lamp bulb and filament must have its own peculiar gas mix if it is to burn long and brightly.

HELPFUL HINT: Did you ever try using Westinghouse flash bulbs to supplement weak daylight while taking outdoor pictures? At shutter speeds of 1/10th or 1/25th they do wonders for lighting faces (at faster speeds they darken the sky). Incidentally, the electrical contact on the base end of all flashbulbs today tends to tarnish, so should be rubbed on rough cloth or a shoe sole before using. Never touch a flashbulb when it is being flashed!

More next month.

Samuel Hibben

WESTINGHOUSE LAMP DIVISION, Dept. BR
BLOOMFIELD, NEW JERSEY

I'd like to have more information about the new Westinghouse J-H1 Fluorescent Mercury Lamp with Golden-White light.

NAME

COMPANY

ADDRESS

CITY STATE

**BUY NOW AND SAVE!
WESTINGHOUSE
FLUORESCENT LAMPS
STILL COST YOU LESS
THAN THEY DID
IN 1940, YET BURN
SEVEN TIMES LONGER!**



C.H.F.
TRADE MARK

Sectional Tables

WITH SWING SEATS



**MAXIMUM SEATING
IN ANY SIZE SPACE**

For Recreation Rooms . . .
Factory Work Tables

Available in units to seat 4 to 24 people, "CHF" Sectional Tables may be purchased in varying lengths to meet your exact requirements. Seats swing completely under table out of the way to give you full aisle space. Your choice of seats . . . with or without backs . . . cast iron frame construction in a variety of colors. "CHF" Sectional tables are standard equipment for schools, factories, clubs, churches and all types of institutions.

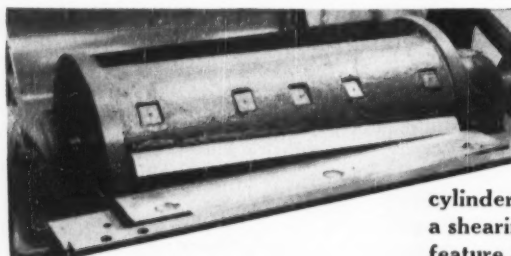
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THE CHICAGO HARDWARE FOUNDRY CO.

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SHEAR-CUT MATERIALS are obtained only with TAYLOR-STILES INDUSTRIAL CUTTERS



This picture, of a partially assembled Taylor-Stiles cutting machine, shows how the multiple knives on a revolving cylinder engage the bed knife at a shearing angle. This is a unique feature of all Taylor-Stiles cutters.

Taylor-Stiles cutters are extensively used in various cutting operations by the paper, plastics, rubber, textile, tobacco, glue, and many other industries.

Engineering data and technical co-operation are given before and after all purchases of Taylor-Stiles cutters, for installation and efficient use.

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and Company
CUTTING MACHINES & KNIVES
RIEGELSVILLE, N. J.

TAYLOR, STILES & CO.
47 Bridge Street
Riegelsville, N.J.

Please send me facts about the use of your cutters by the _____ industry.

Name _____

Title _____

Company _____

City _____

Postal Zone _____ State _____

be manipulated in any way. The basic policies with respect to the indexes are set only after wide discussion and publicity, and then every insurance is taken to be sure that the computation is carried out in accordance with these policies.

This then is the revised wholesale price index. We in the Bureau are certain that the revision has made it a better tool for all its multiple uses. The additional price series and more detailed classifications now presented have improved its utility for contract escalation and for business policy determination or review. The change in the weights and the more uniform treatment of taxes, discounts, and transportation costs have increased its value for economic analysis.

It is not perfect, of course, but we shall constantly strive towards strengthening it. Without a constant maintenance program, an index number like a house, will deteriorate over time, and the rebuilding is both long and expensive.

THE END

HERE
and
THERE

Paper thermometers which are able to tell instantly any temperature within a range of 115 to 500 degrees Fahrenheit have been developed by the Army Quartermaster Corps. Originally designed to test the temperature of heat waves sent out by an atom blast, they have numerous possibilities for industrial use such as in the testing of gasoline motors, heaters, electric appliances, or other equipment.

The new thermometers are both inexpensive and disposable. When commercially available it is believed their cost will not be more than a few cents

apiece. They consist of white pigment coatings on black paper in which each coating is designed to melt at a definite temperature.

When one of these indicators is heated to its designated temperature, the white coating melts and disappears into the black porous paper revealing the black background. The change from white to black is not reversible, so it leaves a permanent record of the indicated temperature. The materials from which these thermometers are made are said to be readily available.

Producing aluminum and saving up to 30 per cent of the electrical power normally required was found possible in a method developed by the B. C. Aluminum Company at its pilot plant in New Westminster, British Columbia.

The process, still largely secret, involves the first practical adaptation of a magnaquanta converter to aluminum production. The converter, which generates a square wave of current different from the usual alternating and direct current, was evolved from the same mathematical formula which led to the discovery of the atomic bomb.

The magnaquanta method of producing electricity had been sought by scientists during the past 25 years. Last November the first test bar of pure aluminum produced by the magnaquanta method was cast at the Canadian pilot plant.

It was made from alumina, a powdered form of bauxite, and kryolite, an artificial liquefying agent, placed together in the furnaces. Further details concerning the production processes were not disclosed.

Simpler and speedier television production should henceforth be possible and with considerable savings both in critical materials and in skilled labor over former methods by use of the printed unit assemblies developed in Sylvania Electric Products' laboratories and described at last month's annual convention of the Institute of Radio Engineers.

The new production technique divides the typical television receiver into about 20 subassemblies each containing an electron tube and its associated components. Each unit is made by print-



"Once there was a poor fish"

- He made frequent trips down to the postoffice to buy postage—afraid to keep too much on hand. He kept the postage locked up in a stamp box—afraid it might get lost or stolen.
- He moistened and stuck stamps in the old fashioned, sloppy and slow way. He often ran out of the right stamps, and had a heck of a time making his postage account come out even. But he's not a poor fish any more—ever since he found out about the DM!



The DM is a desk size postage meter that prints postage, the exact amount needed for any kind of mail, directly on the face of the envelope. Prints a dated postmark at the same time, and your own small advertisement if you want one. Has a moistener for sealing envelopes. Prints postage on special tape for Parcel Post.

- Anybody can learn to use one in a

few minutes. Just dial the amount needed, and press down the handle.

- The DM can be set for as much postage as you want to buy, protects it always from damage, loss, theft. And keeps your postage account on easy-to-see registers.

- A great convenience, in any office. Ideal for branch offices. Ask the nearest PB office to show you—or send the coupon for the free illustrated booklet.



The DM, new desk model postage meter, little larger than a phone, prints postage for all kinds of mail.



PITNEY-BOWES

Postage Meter

FREE: Handy wall chart of new Postal Rates for all classes of mail, complete with changes, and parcel post map showing zones for any locality.



PITNEY-BOWES, INC.
1530 Pacific St., Stamford, Conn.
Please send free postal chart, and booklet on DM.

Name _____
Firm _____
Address _____



USE KIL-KLATTER PADS

FOR A QUIETER MORE EFFICIENT OFFICE!

A quiet office means a more efficient office. Yes, stenographers and typists, as well as those who work around them, will do neater work and make fewer errors.

You can step-up the efficiency at your office, and make it a more pleasant place to work by placing Kil-Klatter pads under all typewriters... they cushion the jar and deaden the noise of typing.



- Made of genuine long-life OZITE felt
- Dent-proof and skid-proof
- Fits many other office machines, too

\$1.25 at your stationer or
office supply dealer

Dept. 112, Merchandise Mart,
Chicago 54, Ill.



ing the various associated components on two small cards, one made of a ceramic material and the other of a plastic.

Multiple electrical points between the cards are made by dipping them in molten solder, thus eliminating the need of interconnecting wires. This contrasts with conventional television receiver assembly methods which require hand soldering for hundreds of different parts and wires.

Two other developments announced at the convention which should prove a boon to aviation included electronic equipment for automatically determining cloud heights every 20 seconds and a new wind-finding radar system that could compute wind velocity and direction data and convert it into printed wind values automatically and almost continuously at relatively low cost.

Ever try to split a slab of foam rubber? One of the major problems confronting the foam rubber dealer who attempts to split his own material has been in controlling the compression of the roll or slab as it is being cut, making it difficult for him to achieve a desirable uniformity.

At present most dealers in foam rubber are sending their stock out to be split or they buy it from the manufacturer already split to whatever thickness they need. If they try to cut it themselves, there is usually a gradual build-up of odd-sized pieces taking up precious shelf and warehouse space, not to mention the additional time and costs involved.

A machine company in Ohio now offers a foam rubber splitter which should mean savings in both time and costs to dealers by allowing them to split their own foam rubber to meet the immediate specifications of their customers.

The new machine, known as the Campbell Model 65 Foam Rubber Splitter, is designed to slice large rolls or slabs down to as thin as one-eighth inch and will handle roll stock up to 36 inches in diameter and to 65 inches in width.

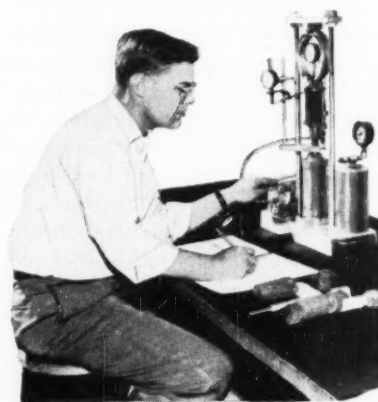
The machine solves the compression uniformity problem by means of dials calibrated to one-thousandths of an inch on each of two feed rolls control-

ling the compression as the roll or slab is fed into the cutting blade.

Further accuracy is allowed by a specially designed blade guide-bar which rids itself of rubber dust particles automatically throughout the operation which allows the blade to glide freely at all times through the material. The rubber splitter is now being built by the Falls Engineering and Machine Company of Cuyahoga Falls, Ohio.

A new lightweight testing machine by which accurate compression or crushing tests can be quickly made has recently been announced by a manufacturer of the Windy City.

The machine's pressure load is applied to a metallic or nonmetallic test specimen through a hydraulic system triggered by compressed air. When



Combining both high sensitivity and high capacity, this device for measuring compression can be used on a variety of materials.

connected to a convenient compressed air source it is ready for work without other preliminary preparations. The load is indicated on a dial, of a double proving ring.

This double proving ring feature makes it possible for the instrument to achieve a relatively high accuracy in the low range even though large loads are involved and, at the same time, eliminates any necessity for changing rings between different tests. When the capacity of the more sensitive outer ring, for example, is reached the heavier inside ring is brought into play.

In this way, advantage may be taken of the outer ring's high sensitivity without any danger of overloading. The low range of the double proving ring

is sensitive to compression loads as low as 1.6 ounces. Complete stress-strain data can be read from the proving ring dial and the specimen strain dial at various intervals during the test.

The machine can be used with effective results on metal, ceramic, wood, or plastic parts, according to its makers, or on paper boxes and other containers as well as on soils, springs, or similar matter. It is designed for use both in industrial and research laboratories and in field testing applications.

The standard model put out by the Labquip Corporation of Chicago has a load capacity of 350 pounds, but machines with capacities of up to 1,000 pounds are also made on order. A lightweight air storage tank with carrying handles is also available for field work or in places where a regular compressed air supply is non-existent.

Improved quality control of machined parts has recently been made possible by a so-called "gold standard" of surface finishes. For many years a need has been felt in the automotive industry for a set of precision reference specimens of surface roughness. There had been no established standards for surface finishings, each company setting up its own.

This anarchic situation resulted in such an undesirable lack of uniformity in surface finishes that it made it difficult, if not impossible, for machinists to match parts or components from different shops in precision production. After seven years of joint research and development by Chrysler and General Motors, the standards defining roughness specimens were evolved and have since been adopted by both the Society of Automotive Engineers and the American Standards Association.

The first replica blocks of the gold master specimen standards will combine five roughness values, the five most commonly used now in the machining of parts surfaces. Every machined, ground, honed, or lapped surface has a roughness value.

Microscopically, a typical metallic surface is marked by minute scratches, grooves, or "peaks and valleys." Holding these "peaks and valleys" within certain standards of roughness has always been one of the key problems

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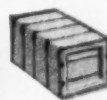
General Hailed Box



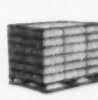
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in industrial precision work, but will now be made possible by the new specimens. They will enable engineers or machinists working with precision parts to compare the roughness value of a part with one of the specimen blocks and determine immediately whether the machined surface has a proper roughness value.

The University of Michigan's Physics Department contributed to the earlier work in the project by its use of a ruling machine for tests that indicated such standards were feasible. Subsequently, the research laboratories of General Motors developed a ruling machine capable of ruling up to 10 thousand lines to the inch on the gold master blocks, while the delicate method of calibrating these rulings was perfected in the Chrysler laboratories.

On-the-job coffee drinking rose 55 per cent between the Winter of 1950 and the Winter of 1951. This rather startling piece of information was brought to light in a recent survey of 1,160 companies in 45 States by Fact Finders Associates, Inc.

First inaugurated on a large scale during the Second World War to boost the efficiency and morale of the defense plant workers, the custom has since been extended to office personnel and embraced a growing number of different industries. When asked to evaluate the effect of coffee breaks in their various companies, 82 per cent of the personnel and industrial relations executives reported noticeably less fatigue among their workers.

Of the executives surveyed, 75 per cent also noted improved morale, 62 per cent answered that worker productivity had increased, 32 per cent witnessed a drop in accidents, 21 per cent reported lower employee turnover, and 12 per cent noted less absenteeism.

Other facts reported in the survey were that while 22 per cent of the reporting companies said the coffee break was specifically required by union contracts, the other 78 per cent had instituted these time-out sessions of their own accord.

In one organization, the Mutual Life Insurance Company, 50 gallons of coffee in addition to pastries are dispensed every morning to two thou-



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sand workers. Before the coffee break period began 800 people used to leave the building daily for coffee.

Simple arithmetic (multiplying 800 by the 15 minutes lost for each coffee interval) shows that in-plant morning coffee now saves Mutual about 200 man-hours daily or \$130 thousand a year in labor costs. The average length of the breaks for all the companies surveyed ranged from 10 to 15 minutes.

A new bore-hole camera which will be used in solving foundation problems in the construction of concrete structures was recently developed for the Army by Engineering Research Associates of St. Paul, Minn. The new development should improve exploratory techniques to discover flaws in all types of bedrock which may affect the stability of dam foundations or other construction projects.

The camera takes 360-degree photographs in a three-inch diameter bore-hole. Cylindrical in shape, it is lowered into the bore-hole and operated electrically by a cable. The camera is built so either dry bore-holes or water bore-holes can be photographed. By using a special projector the picture can be viewed in undistorted form on a cylindrical screen.

A navigational aid which promises to reduce human error to a near minimum and with it the likelihood of future collisions at sea was exhibited by Raytheon Manufacturing Company at last month's Radio and Engineering Show in New York City. Called the reflection plotter, it was designed to be used with standard shipboard radar.

Providing the radar with a visual course and speed recording device, it permits the navigator to keep track of all vessels within the danger range and to plot almost instantly the course and progress of those most likely to cross his path or overtake his ship sufficiently long before any crash possibility.

In past years the radar operator ideally had to remember accurately the positions of all vessels detected by the ship's radar, transfer the information from the radar screen to a plotting or maneuvering board, and then translate all this information into precise mathematical terms before the relative posi-

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tions of his ship and other ships in the danger area could be determined.

It goes almost without saying that all this took time—too much time. Before the various readings and computations could be made the relative courses and positions of the various ships as often as not shifted. A new set of readings and computations then had to be made. A crash could then have already occurred. Perhaps, in some ships, the navigator would not bother.

The new method eliminates the necessity either of remembering the information or of transferring it to a maneuvering board by allowing the operator to plot the action of the ships directly on the radar viewing screen. The plotting surface is made of a non-reflecting plastic material fitted directly to the screen. Edge lighting around the plotter reflects on any objects placed in contact with it, so by using an ordinary grease pencil, marks made on the plotter become clearly luminous.

A special arrangement permits notations to appear as though they were made directly on the radar screen. The luminous pips indicating various ships can be marked and their actions observed. Movements away from the original position enable the operator to make an on-the-spot determination of the speed and direction of each vessel in relation to movements of his own ship. Raytheon announced that these devices are immediately available to shipping interests.

Trouble-shooting bugs in industrial power plants should be made easier in the future by an automatic detecting and recording system developed by Taller and Cooper, Inc. of Brooklyn, N. Y. Their flaw-detecting apparatus can, they say, indicate and record as many as 400 different unusual power plant conditions.

Designed to report, record, and print when and where conditions occurred, and when the situation was restored to normal, it will automatically show whether operations are normal or where deviations from normal occur, whether in transformers, boilers, turbines, circuit breakers, or other components or auxiliary equipment.

It has an electronic memory device that can store up to 26 different reports



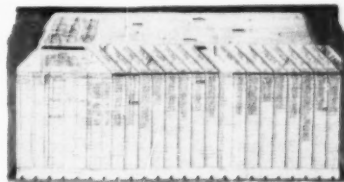
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on occurrences that may have happened as close as ten one-thousandths of a second apart and feed that information to a recorder and printer. This should effectually eliminate any possibility of human error in forgetting to record any single occurrence in the plant log.

It should also allow power plant workers to devote their entire attention to operations, leaving the plant engineers to determine the efficiency of the power units and to correct whatever unusual conditions are reported on the automatic data recorder.

A space-saving substitute will be used in the not-too-distant future for the many bulky vacuum tubes now comprising much of the ever-growing complex network of electronic instruments in modern aircraft, electronic computers, and in the servo-mechanisms and other electronic gadgets of modern industry.

Invented three and a half years ago by Bell Laboratories' Dr. William Shockley, the tiny transistors—some as small as one-tenth of an inch long by fifteen-thousandths of an inch in diameter—are now in their final pilot-plant stage of development.

Described at recent meetings of both the American Association of Aeronautical Engineers and the Institute of Radio Engineers, the transistor is said not only to duplicate the components of the ordinary vacuum tube in less space, but to be much more economical in operation, and to last much longer.

In contrast to the complicated arrangement of filaments, grids, and plates of the conventional tube, the transistor narrows all electronic movement to the narrow confines of a tiny speck of hard germanium crystal. The absence of a surrounding vacuum makes the size difference possible.

Acting like their complex predecessors, however, they can change alternating currents to direct, boost weak signals to larger amplitudes, and perform a host of feats that can only partially be performed by many present-day vacuum tubes.

Their economy of operation is seen in the fact that for every watt consumed by the conventional tube filament, the transistor requires but a millionth of a watt for operation. Al-

You don't like to be a packhorse, do you?

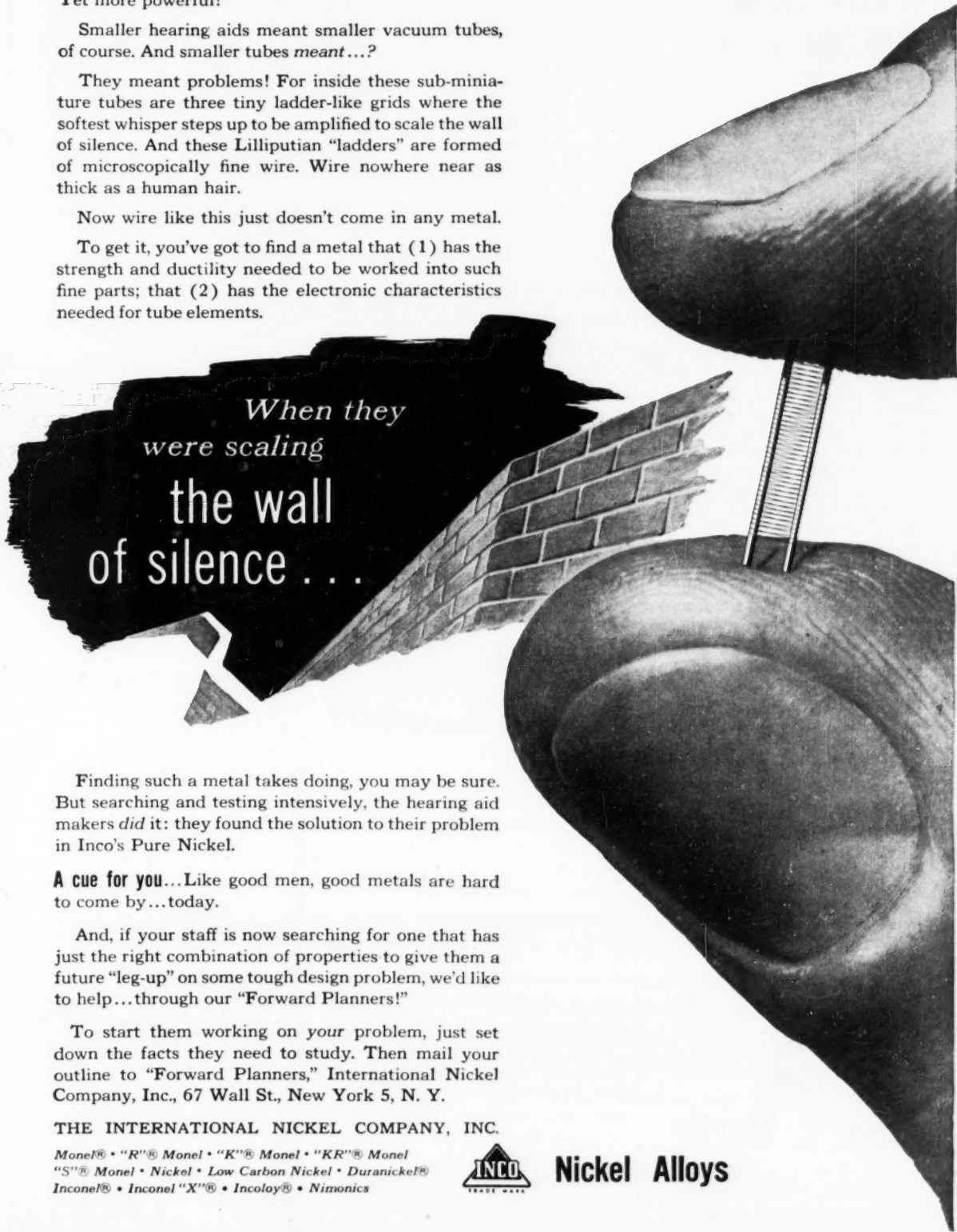
Well, the deafened don't either. And, as a result, hearing aid makers have moved heaven and earth to make their instruments smaller and more compact. Yet more powerful!

Smaller hearing aids meant smaller vacuum tubes, of course. And smaller tubes meant...?

They meant problems! For inside these sub-miniature tubes are three tiny ladder-like grids where the softest whisper steps up to be amplified to scale the wall of silence. And these Lilliputian "ladders" are formed of microscopically fine wire. Wire nowhere near as thick as a human hair.

Now wire like this just doesn't come in any metal.

To get it, you've got to find a metal that (1) has the strength and ductility needed to be worked into such fine parts; that (2) has the electronic characteristics needed for tube elements.



When they
were scaling
the wall
of silence...

Finding such a metal takes doing, you may be sure. But searching and testing intensively, the hearing aid makers *did* it: they found the solution to their problem in Inco's Pure Nickel.

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though germanium is still rather rare and costly, such minute quantities are used that the individual cost of the transistor, for all practical purposes, would be small. Many engineers believe that, by the time it is available to industry, the transistor will be cheaper than the vacuum tube it duplicates.

The metronome and the time clock make splendid working partners, according to the Dow Chemical Company. By setting up an extensive employee music program in its Midland, Mich., plant, including two choral groups, the Dow Symphony Orchestra, and various chamber music groups, it has already reaped vast dividends in employee satisfaction and public goodwill. And company officials gladly offer to point to the records that show it.

Musical efforts of the employees, however, by no means die in the wall-to-wall echoes of Dow's Music Building. Concerts by the choruses and the orchestra are held yearly before various



The SRO sign is usually an accompaniment at the many Dow musical programs each season.

audiences numbering more than 20 thousand persons. Midland, largely a one-industry town, now has a concert season that includes operas, musical comedies, operettas, minstrel shows, oratorios, recitals, and a Spring Festival series. Besides tapping latent musical talent, previously undiscovered abilities in musical composition, dramatics, comedy, and set design are hailed before the public view.

It all started back in 1936 when a group of men in one of the sales divisions proposed a small chorus group. Since then the music program has burgeoned like Jack's beanstalk. During the late war the demand for musical participation among employees became so pronounced that a special Music Department had to be formed and it was

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HIGHLIGHTS OF THE 40TH ANNUAL REPORT

Commercial Credit Company

BALTIMORE

The activities of Commercial Credit Company are operated through three divisions, consisting of its Finance Companies, Insurance Companies and Manufacturing Companies.

Gross Receivables acquired by its Finance Companies, Earned Premiums of its Insurance Companies and Net Sales of its Manufacturing Companies were larger than for any previous year in the history of the Company.



Consolidated balance sheet as of December 31, 1951

ASSETS		
CURRENT ASSETS:		
Cash in banks and on hand		\$ 66,159,758.15
Marketable Securities:		
U. S. Government Obligations	\$ 74,398,664.77	
Other Marketable Securities	15,068,553.91	
	<u>\$ 89,467,218.68</u>	
Less Reserves	632,577.49	88,834,641.19
Accounts and Notes Receivable:		
Motor and Other Retail and "F.H.A."	\$443,073,595.21	
Motor and Other Wholesale	146,867,915.21	
Open Accounts, Notes, Mortgages and Factoring Receivables	91,974,914.87	
Direct or "Personal Loan" Receivables	40,241,438.55	
Sundry Accounts and Notes	3,226,539.89	
Total	<u>\$725,384,403.73</u>	
Less Reserves for:		
Unearned Income	\$ 23,477,398.65	
Losses on Accounts and Notes	11,880,962.28	
Total Reserves	<u>\$ 35,358,360.93</u>	690,026,042.80
Other Current Assets:		
Trade Accounts and Notes Receivable "Manufacturing Companies"	\$ 7,358,150.90	
Premiums Receivable—"Insurance Companies"	295,636.26	
Inventories—"Manufacturing Companies"	11,903,689.28	19,557,476.44
Total Current Assets		<u>\$864,577,918.55</u>
FIXED AND OTHER ASSETS:		
Land, Buildings, and Equipment "Manufacturing Companies"	\$ 8,031,852.02	
Company Cars—used by Representatives	1,329,660.04	
Cash Surrender Value Life Insurance	93,086.19	
Repossessions—at depreciated values	495,133.61	9,949,731.86
DEFERRED CHARGES:		
Prepaid Interest and Discount	\$ 2,852,949.66	
Prepaid Insurance and Expenses	1,222,548.15	4,075,497.81
		<u>\$878,603,148.25</u>

LIABILITIES, CAPITAL AND SURPLUS		
CURRENT LIABILITIES:		
Notes Payable—Unsecured Short Term, Accounts Payable:		\$455,073,500.00
Credit Balances of Manufacturing and Selling Agents	9,442,460.54	
Sundry	10,619,485.41	
Due Customers only when Receivables are collected	<u>7,626,545.86</u>	27,688,491.81
Accrued Income and Excess Profits Taxes		28,909,084.55
Accrued Other Taxes		3,015,893.15
Customers' Loss Reserves		19,358,156.49
Total Current Liabilities		<u>\$534,045,126.00</u>
UNEARNED PREMIUMS—"INSURANCE COMPANIES"		31,371,410.93
RESERVES FOR:		
Losses and Loss Expense—"Insurance Companies"	\$ 5,703,274.26	
Fluctuations in Security Values	406,184.71	
Canadian Exchange Fluctuations	<u>130,496.18</u>	6,239,955.15
UNSECURED NOTES:		
Notes, 2½% due serially—1953-1957	\$ 41,500,000.00	
Notes, 3¼% due 1961	40,000,000.00	
Note, 3% due 1963	<u>50,000,000.00</u>	131,500,000.00
SUBORDINATED UNSECURED NOTES:		
Notes, 3% due 1957	\$ 25,000,000.00	
Notes, 3.95% due 1964	<u>25,000,000.00</u>	50,000,000.00
MINORITY INTEREST IN SUBSIDIARIES		
		62,063.94
CAPITAL STOCK AND SURPLUS:		
Common Stock—\$10 par value:		
Authorized—3,000,000 shares		
Issued and Outstanding—2,278,843 full shares and 130 shares of fractional scrip	\$ 22,789,730.00	
Capital Surplus	38,042,919.93	
Earned Surplus	<u>64,551,942.30</u>	125,384,592.23
		<u>\$878,603,148.25</u>

A few facts, as of December 31, 1951 and 1950

CONSOLIDATED OPERATIONS	1951	1950
Gross Finance Receivables Acquired	\$2,783,942,471	\$2,346,583,865
Gross Insurance Premiums, Prior to Reinsurance	41,604,516	42,739,802
Net Sales of Manufacturing Companies	99,115,875	84,992,183
Gross Income	118,941,880	106,138,880
Net Income from Current Operations, before United States and Canadian Income Taxes	44,937,240	41,022,804
United States and Canadian Income Taxes	24,223,353	19,869,293
United States Excess Profits Tax	1,000,000	1,300,000
Salaries, Wages, Commissions	46,625,518	43,069,111

NET INCOME	1951	1950
Finance Companies	\$11,873,474	\$10,925,044
Insurance Companies	3,265,108	5,397,361
Manufacturing Companies	4,575,305	3,531,106
Net Income from Current Operations	<u>\$19,713,887</u>	<u>\$19,853,511</u>
Net Income per share on Common Stock	\$8.65	\$8.64
United States and Canadian Taxes on Income—per share	11.06	9.28
Book Value per share—Common Stock	55.01	51.02

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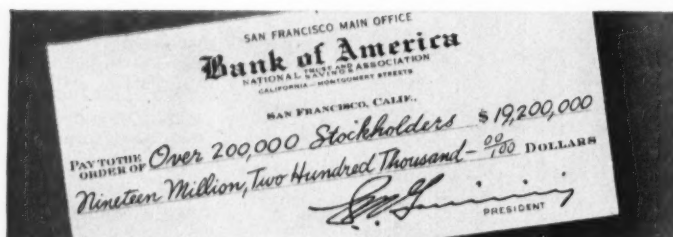
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Dividend... Bank of America NT&SA

For the convenience of stockholders who wish to have dividend funds available before their quarterly Federal Income Tax payments are due, the Board of Directors adopted a new schedule of dividend payments. The first quarterly \$40 instalment of the current semi-annual period will be paid according to the old schedule on March 31, 1952, to stockholders of record as of February 29, 1952. The second quarterly instalment, however, will be paid on May 31, 1952, to stockholders of record on May 15, 1952. In the past this quarterly payment has been made on June 30.

Q. Who owns the Bank of America?

A. More than 200,000 shareholders!

Ownership of the Bank of America N.T.&S.A.—which was founded in 1904 with \$150,000 and now has total resources over seven and one-half billion dollars—is held by more than 194 thousand men and women and 6,185 institutions. Bank of America stock is an important asset of many institutions, including labor, fraternal and fiduciary organizations, foundations, investment trusts, insurance companies and savings banks.

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BANKING THAT IS BUILDING CALIFORNIA

then that the Dow Symphony Orchestra also came into being.

The decision to admit members of Midland's citizenry who were not necessarily employees helped to cement good relations between the town and the industry even further. No charges for the concerts, operettas, and musicals are made.

Voluntary donations from the townspeople amounting to about \$3,400 a year have been pooled into the Midland Music Foundation which grants musical scholarships to the town's promising young bloods. The flourishing Dow program is now being studied as a possible pattern for other communities.

Although ramie is old as the Egyptian mummies, it is only recently that its production in this country has become commercially successful. It may seem strange that this fiber (so ancient, say many scientists, that it was used to wrap up the dusty old Pharaohs before putting them away) is now modestly blossoming into a new American industry of substantial potentialities.

Due to its unusual strength it has already begun to compete with wool and other fibers for industrial purposes, but is not believed likely to replace other textiles in clothing. Experiments conducted by the U. S. Navy indicate that stern-bearing packings of ramie have shown no signs of wear after 1,000-mile runs, although flax, which was formerly used, would have completely disintegrated under such stress.

The strength-giving characteristics of ramie when blended with wool are indicated by the fact that it has a tensile strength of 100 thousand pounds per square inch compared with 15 thousand to 18 thousand pounds per square inch for wool. It has the thermal characteristics of wool and is stronger when wet than dry.

Other applications include its use in upholstery fabrics, in packing material for industrial shipments, in the manufacture of high-pressure fiber hose, for salmon nets, linotype mats, milk filters, and in blending with other textiles.

Ramie was first introduced to the United States in 1855, but no progress was made in its cultivation and processing until recently because of lack of suitable machines for decorticating

(separating the fiber from its stalk) and degumming the fiber.

Instrumental in its initial development was Newport Industries, Inc. which, after ten years of laboratory and experimental work, began its extensive cultivation deep in Florida's everglades. Using a machine similar to that used for sisal and abaca, a practical and relatively inexpensive means of processing the fiber was developed.

Another budding industry in the textile field is kenaf, a vegetable fiber that is more and more used as a substitute for jute. In recent years strained relations between India and Pakistan have made future imports of jute, the primary textile used in burlap production, increasingly uncertain.

While Pakistan cultivates most of the jute currently used in the United States, India weaves it, so any trouble between those two countries would probably reduce this country's future imports to a painful trickle.

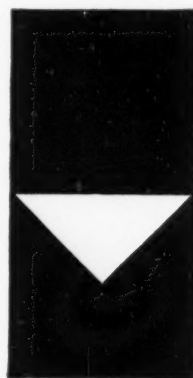
Under encouragement from the Government, The American Kenaf Fibre Corporation of West Palm Beach, Fla., has recently launched a million-dollar project with an estimated production of between one and two million pounds for the first year's operation. The original kenaf seed, imported from Cuba, was planted last August and owing to its rapid growth, was ready for harvesting within a few months.

Some difficulties, however, such as the development of an efficient decorticating machine have yet to be overcome. Another problem is the costliness of the process. Currently priced at about 30 cents a pound, the price should eventually come down to about 12 cents, according to authoritative trade sources, for its American production to be economically sound.

Recently overheard in a discussion at a meeting of the Soil Science Society of Florida was the contemplated possibility of growing and processing *sansiveria*, a lily-like plant, from which an effective substitute for Manila hemp could be made.

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survey instrument which is both less costly and more rugged than those which are currently available and should prove a veritable boon to those Civilian Defense survey teams or uranium prospectors who still lack such indispensable devices.

The new gamma survey instrument, the product of joint researches by S. R. Gilford and S. Saito of the Bureau's Electronic Instrumentation Laboratory, requires no microammeter which is an integral part of the conventional instrument. The microammeter, which normally indicates the radiation level, it should be said, is neither cheap nor rugged nor is it especially suited to modern mass production techniques.

The new instrument allows radiation readings to be taken directly from a potentiometer dial. To read an unknown value of radiation the operator turns the dial to the point at which an audio signal is heard in the accompanying headphones. With the dial set for a particular radiation level it becomes an easy matter for the operator to walk along and locate by ear a series of equally radioactive points.

Vacuum impregnation with sodium silicate or other heat-resistant materials can now be used to make metal castings pressure-proof for such applications as jet engine compressor housings and magnesium alloy gear boxes. Developed by the F. J. Stokes Machine Company of Philadelphia, the new process can also be useful in the manufacture of instruments, and electrical equipment.

Other applications include the processing of food, tobacco, leather, textiles, wood, and other building materials, as well as the filling of thermometer tubes and other containers with small openings. Sodium silicate is particularly suited to the impregnation of products subject to high temperatures or pressures, or where dielectric properties must be considered.

The castings to be impregnated are placed in a vacuum chamber and air is removed with a high-vacuum pump. Then the impregnating compound is introduced into the chamber, filling all the capillary voids in the casting in the absence of air. Although its usefulness in correction of casting faults is limited to capillary defects and is not recom-



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mended for visible porosities, it can effectively prevent leakers and weepers.

An alkaline derusting process for steel, cast iron, malleable iron, and other iron alloys has been developed by Enthone, Inc., New Haven, Conn. The process is claimed by the manufacturer to be unique in that no acid is required in the procedure and possibilities of subsequent rusting are eliminated.

Other advantages of the process are the speed with which alkaline derusting is accomplished and the fact that there is no attack on the base metal as that which occurs when acids are used. Because the operation is alkaline, it cleans the metal simultaneously with the derusting process.

The solution can be operated in a steel tank at room temperature. The work to be derusted is made the cathode in a solution of Enthone Derusting Compound from a few seconds to several minutes depending on the condition of the metal surface. The process may be used without a source of heat.

Electric shock harpooning of whales was begun on an experimental basis in this year's whaling season. Usual harpooning methods consist of allowing an explosive charge in the head of the harpoon to burst on entry into the whale thereby wounding it.

Severely wounded it may languish as long as an hour before it dies and part of the valuable flesh and blubber are damaged. By the new method death is nearly instantaneous and the whale undamaged. The carcass floats on the surface ready to be scooped up by the whaling vessel.

Some technical difficulties remain unsolved, but it is expected that the new harpoon permitting a larger whale oil take as well as materially reducing fuel consumption of the whaling vessel may be universally adopted, it has been learned, after two or three more seasons of experimental use have elapsed.

An ignitron-rectifier locomotive, now being tested by the Pennsylvania Railroad Company, may be the key to further expansion of electrification of the nation's railroads. Developed by the Westinghouse Electric Corporation, the new locomotive is said to combine the economical operation of an A.C.

power supply with the simplicity and higher starting power of D.C. motors.

One of the principal deterrents to railroad electrification has been the initial high cost. While the direct current motor has distinct advantages over the alternating current motor in traction, the transmission and distribution costs of direct current have been generally prohibitive for the railroads.

To avoid these costs either the less efficient A.C. motor had to be used or a bulky and forbiddingly expensive motor-generator set had to be installed to convert the alternating into direct current. The new locomotive, using ignitron rectifiers, makes this conversion and makes it possible to operate at commercial frequencies of 50 or 60 cycles (compared to the 25 cycles now required by A.C. locomotive motors) thus offering the possibility of reducing electrification costs and widening the field in which it is economically justified for large operations.

THE END

FRONTIERS

Continued from page 15

is the one in Financing. We were fortunate to find that an officer of the National City Bank in Troy was willing to become its chairman. The National City Bank realized, as early as 1948, the probable trend of things to come in case of a possible change from a fully civilian to a substantially war production activity, and it concerned itself with problems that were bound to result from the unbalancing of the country's production machinery.

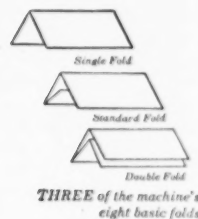
The bank was especially concerned about the effects that dislocations could have on small establishments. It had a lot of experience in World War II and its officers were very successful in helping to stabilize the economy of our community under comparable circumstances that existed then.

Early in 1951, this bank signed a contract with the United States Department of Commerce, by which it became designated as the Procurement Ser-



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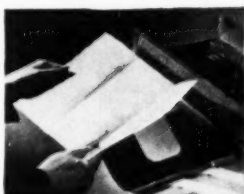
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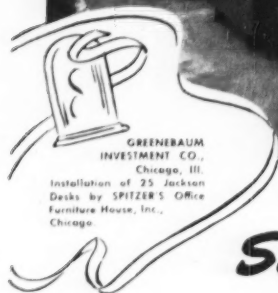
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vicing Agency for the Government, acting through the Department of Commerce. This contract, however, was rather vague, based on generality, but it did provide specifically that a bank so designated should serve everyone in its area, regardless of the business, political, or other affiliation, and that it should be done without charge and without selfish motive.

Only the Beginning

It was realized that this contract was drawn merely as a starting point and that, in fact, it was actually only good scenery and that the benefits to the community depended entirely upon what was done by the bank and its officers. The bank also realized that if something substantial was to be accomplished, that help was needed. The Industrial Preparedness Committee and the bank joined forces and, as a result of a meeting of minds, a Finance Committee was added to the Industrial Preparedness Committee organization.

In working together on problems confronting us, a real servicing agency was created and received enthusiastic response. The bank communicated

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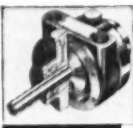
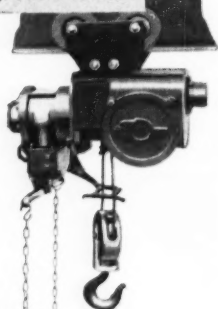
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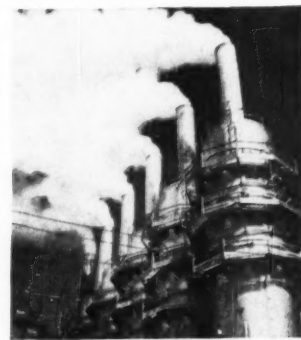


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CORSON PHOTOGRAPH FROM DEWANEY

with most of the official procurement servicing agencies east of Cleveland to Springfield, Massachusetts, and south to Philadelphia, making particular and specific contacts in some of the primary points in Washington, D. C.

In this original contract it was set forth very clearly that the facilities and the assistance of the Ordnance Association was available to the Procurement Officers on investigations and checking, and it was emphasized that the Finance Committee could be of great service in a more particular way. The contacted parties were advised that a letter of in-

roduction or a telephone call from the bank with regard to any prospective contractor would carry with it the definite assurance that the bank knew the man to be a bona fide and legitimate business man.

They were advised that he had a plant capacity for certain types of work and that the type of work under discussion with the Procuring Officer was within the capacity of the plant. Furthermore, procurement officers were assured that the Committee on Finance talked with the contractor's bank, wherever it might be, and that the Committee was satisfied that the potential contractor's bank would co-operate, if necessary, in the financing of any prime or subcontract.

Favorable Response

The reaction to this activity from every Government agency was excellent. It was self-evident that such assurance to a Procurement Officer took care of two major items of his activities, namely character and capacity of the man and his plant, plus the financial ability. That left the Procurement Officer in a position where he could devote his time to procuring.

During the past year and a half representatives and officers of the bank and members of the Industrial Preparedness Committee have contacted a great number of manufacturers in the area. These manufacturers were urged to go out for defense contracts. This encouragement took hold and, as a result of the interest developed, a very large percentage of manufacturers in this area obtained through their own efforts a sizeable volume of war production work. We have many firms in this area running as high as 90 per cent of their capacity on war work and a multitude of them are running between 25 and 50 per cent.

During this year and a half we had interesting and extremely difficult cases. We have not been successful in every attempt, but we have hit the ball often enough so that the batting average is quite satisfactory. It has been definitely established, beyond any point of argument, that our assistance has proven of real value in the negotiations for prime contracts, negotiations for subcontracts, expediting the delivery of raw materials, negotiations with the



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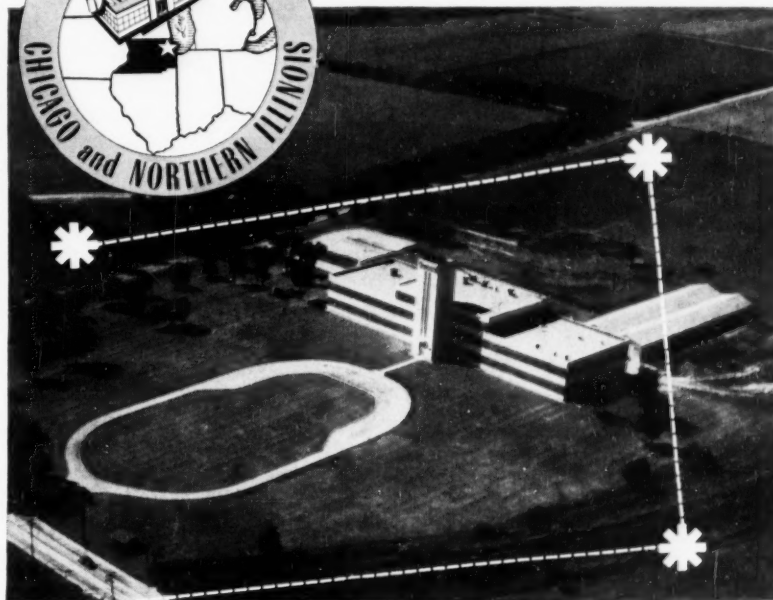


Photo by Morris Aerial Survey

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That is why, before you decide on *any* industrial location, you are urged to investigate Chicago and Northern Illinois. We'll make that easy for you.

A LETTER TO US . . . describing your requirements will bring you a careful analysis of this area's advantages as they apply to your business. Or if you wish, we will send you a carefully screened list of the available buildings or sites that would be suitable for your operations, based on the information you give us.

We keep all such inquiries confidential. Just write us.

Industries in the Chicago area have these outstanding advantages: Railroad Center of the United States • World Airport • Inland Waterways • Geographical Center of U. S. Population • Great Financial Center • The "Great Central Market" • Food Producing and Processing Center • Leader in Iron and Steel Manufacturing • Good Labor Relations Record • 3,062,000 Kilowatts of Power • Tremendous Coal Reserves • Good Government • Good Living • Good Services for Local Tax Dollars.

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various Armed Services, particularly with respect to Army Directives, the speeding up of action on applications for accelerated depreciation certificates, the proper channeling of applications for priorities, and other Governmental negotiations.

Varied Experiences

Some rather unusual and exceptional financing has been done in the financing of prime and subcontracts. Plant inspections have been made for the Army, conferences have been held at the suggestion of Military Headquarters in Washington, in order to straighten out financial affairs of contracts located as far as 250 miles away. All this was done purely in an advisory capacity.

One of the most valuable services which is now in progress is the forming of a connection with one of the major aircraft companies for the purpose of



HUBBS PHOTOGRAPH FROM MONMOUTH

lining up subcontractors for that company in this area on production schedules to last at least two and one-half years. In this instance, twelve plants in this area have been specifically approved and two of these plants have already received valuable contracts.

Through the assistance of specialists on the Industrial Preparedness Committee, we have been able to interest one of the outstanding heat treating organizations in the East in the possible establishment of a custom heat treating plant in the Capital District. We are now in the process of a rather complete survey in which the bank, the Ordnance Association, the Department of Metallurgy of Rensselaer Polytechnic Institute, and the New York State Department of Commerce are co-operating.

While we should not pre-judge, it

is our opinion at this time that the establishment of such a plant will do a great deal to break the bottleneck in the metal industry that exists in this area at the present time.

While the National City Bank of Troy and its officers play a vital part in the efforts of the Industrial Preparedness Committee, the people served are distinctly advised that doing business with the bank is definitely not a condition precedent to the bank's co-operation. No charges are made for financial advice and all the work of everyone connected with the Finance Committee, the bank, or the Industrial Preparedness Committee is voluntary.

Advice from the Experts

The Contract Committee is staffed with experts in business law, management, expediting, and men who are well acquainted with all Government and National Production Authority rules and regulations. They are experts in drafting contracts, working agreements, Government orders, and Government bids. All the men of the Contract Committee are willing and able to help the small shop in any problem that may confront the small business establishment in regard to orders, contracts, and priorities.

The Committee on Job Processing is helping small shops with engineering, tooling up, advice on tolerances, specifications, and other technical matters. This helps to eliminate bottlenecks and overcome any difficulties which may arise during the carrying out of a defense order or defense contract. The members of this committee are engineers and production men, tool makers, and experts in job processing.

The Plant Protection Committee consists of men who are plant security officers in large plants or municipalities. They are trained in their line of work. They know how to prevent sabotage and how to protect shops from possible subversive interference. They are able to give advice in regard to safety and security of plants.

The co-ordination of the committees is done by area representatives. These representatives are men who know their community and their territory. They know the men operating shops. They know what the shop can do;



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they know the good mechanics, carpenters, and craftsmen in their community. They know how important the human factor is in doing outstanding work and they know the man behind the machine, so often the most important factor between success and failure.

Milestones of Progress

The Industrial Preparedness Committee has now been in existence for almost one year. The industrial establishments in our district know that we have no defense contracts to hand out. We are successful in bringing subcontracts and prime contractors together. We are able to help and advise the shops that need assistance. We are able to bring "know-how" in contact with each other.

We distribute information on Government regulations, priority rules, or any publications and printed matter that may be available to carry out defense orders. We make it our business to keep in contact with Government authorities and procurement offices of the Armed Forces, especially the NPA, with its Office of Small Business. We help co-ordinate the work of local field offices of the NPA and the Cham-

THE BAROMETERS

The DUN'S REVIEW Regional Trade Barometers, including back figures by months from January 1939, by years from 1935, adjusted for seasonal variation, together with additional material, are available in pamphlet form.

Other helpful information has also been reprinted for those who are interested in regional variations in trade volume. They are entitled, "The DUN'S REVIEW Regional Trade Barometers"; "How Consumer Buying Varies Seasonally in 29 Regions"; and "How to Use Regional Trade Barometers." The first of these reprints contains one list defining each region by counties and a list giving the regional locations of all cities of at least 25,000 population.

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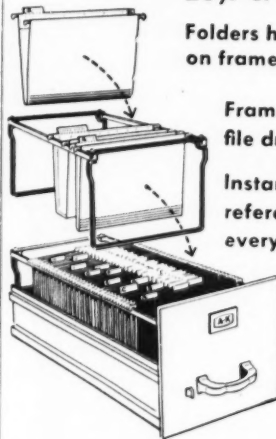
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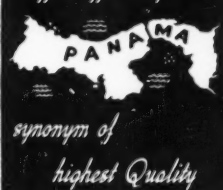
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ber of Commerce, the procurement service agencies of the Department of Defense with small shops in our district.

Team work and co-operation between prime and subcontractors made the production of armaments and war supplies an outstanding success in World War II. The experience in the past months convinces us that we will again be successful in developing all the sources of production to a maximum efficiency for the defense program. We are successful in bringing existing talent together, we have many calls lately from large prime contractors inside and outside of our district who are in search of suitable facilities.

We were always able to find shops that can do the work. We were able to assist shops in getting defense work from General Electric, Watervliet Arsenal, Republic Aircraft, Bendix Aviation, and many more. We do not know of any subcontractor who did not perform to the satisfaction of these prime contractors. We believe the Committee of Industrial Preparedness is a great help and plays a very successful part in the industrial organization program.

THE END

HOTEL

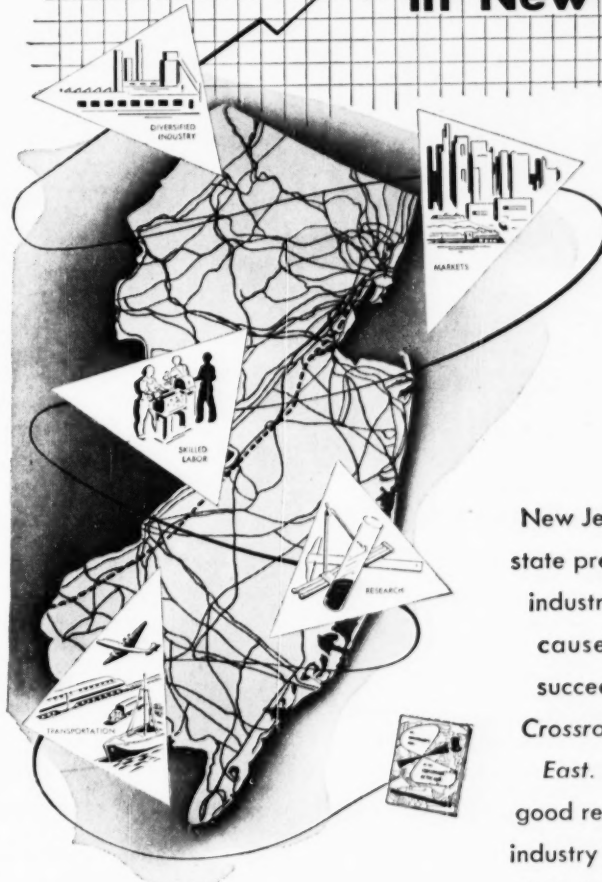
Continued from page 21

dered at first when patrons objected to the novel requirement that they take their boots off before going to bed.

In the Victorian era its cars were decorated with plush hassocks, velvet draperies, antimacassars, gleaming spittoons, rococo woodwork, and mahogany-paneled smoking rooms "for lovers of the weed." The interiors of modern Pullmans resemble elaborate space ships with pastel-tinted duplex rooms glowing with indirect light and soft music, foam mattresses, sunken lounges, and glass-enclosed vista domes. The best of them ride like rocket ships, too. Waking one night recently as my sleeper purred across the Kansas plains at 80 miles an hour, I found it necessary

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to raise the blind to find out if we were moving at all.

This unruffled progress would, I am sure, go against the grain of the eccentric Chicagoan who, years ago, became so attached to Pullman travel that he installed a berth in his home for every-night use and attached a motor to make it rock slightly as though in motion.

M-m-m-m

Pullman's food, too, has been famous over the years. Gone, however, are the partridge, pheasant, venison, buffalo steaks, and golden plover that once graced the bills of fare from 60 to 75 cents a portion. To-day's more spartan menus tell you precisely what you get and no nonsense about it: "Bacon (5) and eggs (2); Toast (3 slices); Olives (8); Lemonade (14-oz. glass)." It



MERRIN PHOTOGRAPH FROM MONKMEYER

might be added that meals are served by Waiter (1) with Knives (2), Forks (3) and Spoons (2).

The Pullman Company has never owned a mile of track, never actually hauls or moves a single car. It has a fleet of sleeping cars, either owned or leased, which it furnishes to railroads under operating contracts. The railroads determine in what trains and over what routes the cars will be operated, and also handle the sale of accommodations. Pullman does not even own itself; since 1947 it has been owned by the 59 railroads which use its service.

Pullman does, however, provide all maintenance and supplies, and unless you happen to be a perfectionist a Pullman is probably cleaner and in better repair than your own home. Electricians, plumbers, mechanics, glaziers, painters, upholsterers, and cleaners swarm all over the cars at the end of each run. Special cards are provided for conductors and porters to jot down any defects that may have cropped up.

The origin of the names that are painted on the outside of sleepers, in place of numbers, has long been a source of mystery to travellers—and Pullman doesn't anyways have an explanation itself. In the early days, according to rumor, Mr. Pullman's daughter Florence got \$1, or \$10, or \$100 for each name she dreamt up. This may explain how 82-ton steel behemoths came to be called "Gwladys" and "Rosebud." Other names indicate a car's berthing arrangement. Sleepers of the "Lake" series, for example, all have ten sections, two compartments, and a drawing room.

What's in a Name

The names have sometimes proved embarrassing. "Popocatepetl" was dropped because no one could pronounce it; two quaint Indian appellations were painted out in a hurry when it was discovered that one meant "bed-bug," the other, an unprintable word. Convening Baptists objected to having the "Pope" along in their special, and the occupants of President Truman's campaign train were somewhat astonished when the staunch Republican "Andrew W. Mellon" joined them. Nothing ever compared, however, with the roar that arose in the South on the evil day that the "General William Tecumseh Sherman" rolled through Georgia from Atlanta to the sea!

During World War II, Pullman bedded down an average 210,000 troops and 300,000 civilians per week. In peacetime years sleepers tend to travel in herds—to Florida, Arizona, and



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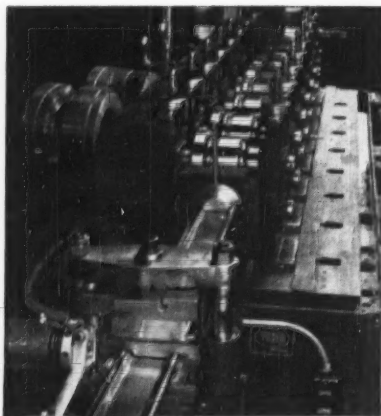
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California in Winter, for example. Other big movements include bowl games, political conventions, inaugurations, the Kentucky Derby, Summer camps. It required 700 sleepers to transport Shriners to their Los Angeles convention in 1950.

No train provides Pullman with more prestige or headaches than the "POTUS Special" for the President of the United States. The Chief Executive's "U. S. Car No. 1"—formerly the "Ferdinand Magellan"—is an armor-plated car that is fitted out with bullet-proof glass windows. There are four private rooms along with a shower room. The car also contains an observation lounge.

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Onerous Honor

The crew of the POTUS Special is specially selected and permanently assigned. This was an onerous honor in wartime, for the men had to be ready to leave at a moment's notice, never knew where or for how long they were going. When FDR flew to the secret Casablanca conference he departed from Florida; there his entire train and crew were incarcerated behind barbed wire for ten days, to keep the news from leaking out.

Another secret wartime trip almost cost Conductor W. A. Brooks his wife; he brought in the FBI to prove that he actually was in California with the President on the day she heard Mr.



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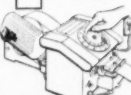
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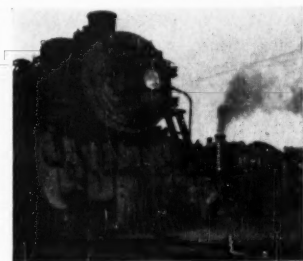
62 Marsh Bldg., Belleville, Ill.

Roosevelt broadcast, ostensibly, from the White House.

The Pullman Company provides all conductors and porters for its cars. They are a tactful crew—they have to be. It is a delicate task to explain to an aggravated passenger that he cannot have the room which stands so invitingly empty—it has been sold “down the line.” Then woe betide if the intended occupant doesn’t show up and the room remains empty!

Up in the Air

And try to mollify the passenger in the upper berth who wants to occupy his seat when the passenger in the



DEVANEY PHOTOGRAPH

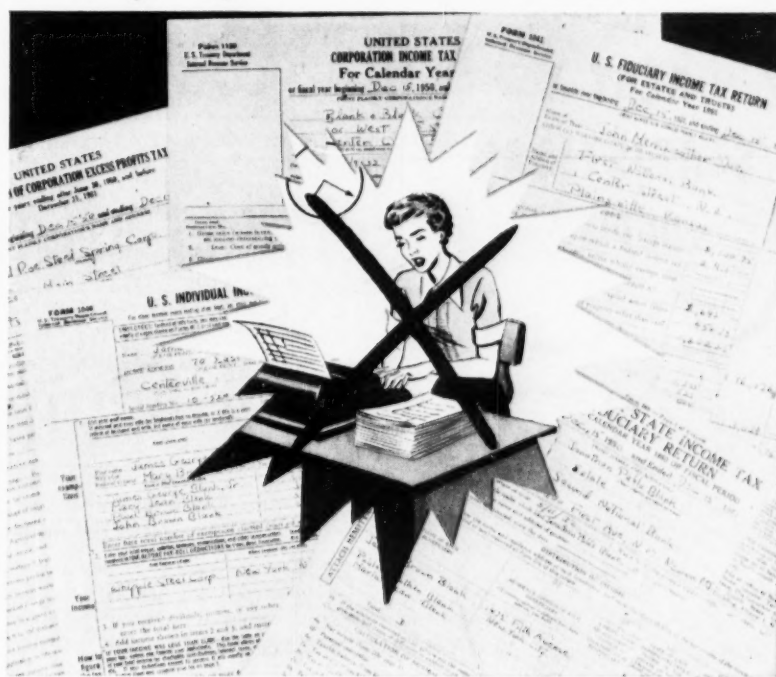
lower is still asleep. Pullman holds that “a man’s berth is his castle” and he can sleep in it all day if he wants to.

Occasional duplicate sales of the same space are another headache. When two stubborn customers both insisted on their right to “Lower 5” one night, Conductor Raymond Layman went into the next car, borrowed a duplicate set of curtains and gave “Lower 5’s” to both.

“Our porters are this company’s greatest asset,” says Pullman president Carroll Harding flatly. Any traveller will attest that, for courtesy and service, this group of 9,000 Negroes (with a sprinkling of Filipinos) is certainly among the finest in America. Traditionally they are among the most respected members of Negro society. I will never forget the pride in the voice of a Negro wife I overheard telling a department store credit manager, “We’re a Pullman family.” It established her credit immediately.

Since he is to be in close contact with passengers of both sexes for long periods of time, an applicant for a porter’s job is investigated almost as if he were undergoing an FBI loyalty check. He must pass mental, physical,

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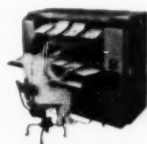
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and personality tests, practically memorize the book of rules, learn to operate 38 different kinds of air-conditioning panels, "make down" 43 different kinds of berths, including elevator, flip-flop, double-pivot, and sliding varieties, and undergo a third degree in which snarling inspectors subject him to every indignity he is ever likely to encounter from obstreperous passengers.

Survival of the Fittest

If he survives the ordeal with skill and dignity he is eligible for a lifetime job. He will have to spend years as an "extra" man, however. If he gets in trouble his powerful union the militant Brotherhood of Sleeping Car Porters, will go to bat for him if it thinks he is right. If it believes he has violated a trust which it considers sacred, it will tell him he has no business in either the company or the union.

Taking care of "his people" is a porter's religion. "If they have to ring for it, you're not doing your job," one porter told me. After stowing luggage, he makes the beds in his car according to a preordained ritual—from the opening of the berth to the final pat on the pillows. Then, when all passengers are safely tucked away, he picks up their shoes for shining. He may occasionally be assaulted during this process—some passengers think he is trying to steal them.

Some things a porter has to explain. Many travellers still profess to be puzzled by the little string hammocks in the berths. The classic story deals with the rookie baseball player who was told by his teammates that the hammock was there so he could rest his pitching arm. He slept with his arm in it all night and found it so stiff he couldn't pitch for a week.

This experience was as nothing, however, compared with the perplexity of the newly-arrived European business man who occupied an upper berth for the first time in his life. As he sat there next morning, wondering how to get down, the passenger in the berth below rang his call-bell. The European saw the porter come down the aisle and bend over directly beneath him. Thinking it was a strange way to descend, but game for anything, he jumped down onto the porter's

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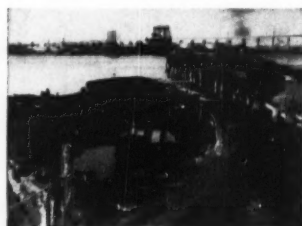


back, sent him crashing to the floor with a broken arm.

When a porter has enough seniority, or "whiskers," he may bid for one of the prized "varnish" runs like the Santa Fe's *Super Chief*, that carries movie stars and other celebrities between Los Angeles and Chicago. The porter on this run knows he will have to remake Marlene Dietrich's bed with her own silk sheets, stow Louis B. Mayer's personal supply of sirloins and Russian rye bread in the refrigerator, waken Spencer Tracy with a double pot of coffee at 5.00 A.M. Also he becomes accustomed to Oriental potentates who travel with food tasters, their own native water in wicker containers, and compasses to point the way to Mecca for their frequent prayers.

His First Love

Porter "Doc" Ferniel has enough seniority for this sort of run, but he wouldn't trade the one he has been doing for the past 30 years for any other in the country. Doc's North-western Pacific train, which runs be-



ARROWHEAD PHOTOGRAPH

tween San Rafael and Eureka, Cal., consists of a coach and sleeper tagging along behind sixteen carloads of freight.

People will delay their trips until it is Doc's turn to be aboard. He knows that Mr. Fletcher is an "early bedder," Mr. Blake a later bedder who likes a glass of milk with a little sugar in it before he retires. Passengers shake hands with Doc when they disembark, come down to the train to ask him to make purchases or run errands for them in San Francisco. When a "recline" in business threatened to eliminate Doc's beloved line, he went around to the homes of all his old customers and asked, "How come you ain't been travelling my car lately? You want me to lose my job?" Business improved.

The resourcefulness of porters is legendary. Pullman's "Pat-on-the-

Spend less for BETTER ADS

Use "Budget Basis" service... the proved, practical way to get sales aimed advertising for your lively firm... anywhere. Jot down your problem; we'll find a sensible answer. On your business letterhead, request Folio 2 A

AD SCRIBE * North Canton, Ohio

* proprietorship since 1940 • ADP, APA recommended

**Now available
for showing**

Without Charge

**"CREDIT—
Man's Confidence
in Man"**

Presented by

DUN & BRADSTREET, INC.

16 mm. Film

33 Minutes Long

This film depicts the history and influence of credit in the growth of America, and the function of credit reporting. The story is told in simple analogy and narrative comment.

For booking, write to

**MODERN TALKING PICTURE
SERVICE INC.**

45 Rockefeller Plaza
New York 20, N. Y.

MASTER ADDRESSER

No Stencils—No Plates
No Ribbons
No Ink

Prints from carbon
impressions typed on
a long strip of paper
tape—easily prepared in
your own office. Address
envelopes, cards, circulars, etc.,
at rate of 20 or more a minute.
Write for information and
name of nearest dealer.



Two
Models

\$24.50, \$44.50

(Fed. tax and Supplies Extra)

Master Addresser Co.

Originators of the spirit process addresser.

6500-U West Lake St., Minneapolis 16, Minn.

Back" file is full of letters of praise for porters who have forced pencils between the jaws of epileptics to keep them from choking to death, made tourniquets for the slashed wrists of would-be suicides, sat up all night comforting the sick and frightened, and lent money to travellers who forgot theirs or who had none to bring.

They have been midwives to babies by the score. When Porter Stephen Hopkins presented to its father a baby he had delivered, the wrought-up parent gave him 50 cents. "I informed him there was no charge," said Hopkins, "so he took the money back."

Pullman Heroes

Porter Oscar Daniels was scalded to death when he threw himself against a door to cut off steam from a wrecked locomotive, but he saved the lives of his passengers. Sixty-three-year-old Porter Lee Keys ordered his passengers to lie down on the floor, then lost his own life trying to stop his runaway car in the mountains of Pennsylvania. Sleepers have been named for both of these men.

For decades children travelling alone have been entrusted to the care of porters. "I knew your porter would take as good care of my little girl as he did of me when I travelled alone," a mother once wrote to Pullman, "but I did not really expect him to go to the trouble of braiding her hair."

"I was travelling with my four youngsters," wrote a Navy wife. "The baby was sick and I was up half the night with him. In the morning I was so exhausted I didn't know how I was going to get the children dressed and ready to get off. I just lay in my berth and cried. When I finally found strength to get up I found the children washed and dressed, sitting on the seat eating milk and cookies. I tried to thank the only other woman in the car, but she told me your porter had done it. He wouldn't let me tip him for it, either. God bless him!"

Pullman porters are currently paid an average of \$290 for a 205-hour working month. Even among themselves they are reluctant to talk about the tips they make in addition, but it is estimated that these equal from 10 to 25 per cent or more of salary, depend-

see how
KOOLSHADE® Sun Screen
shuts out summer heat!

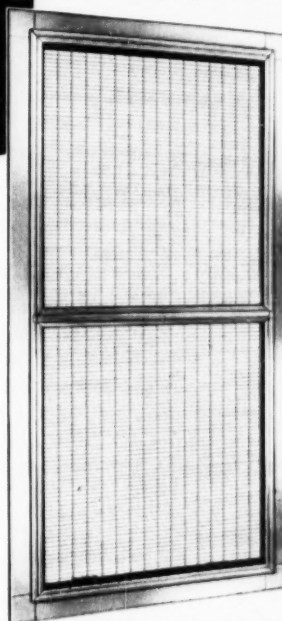
Another
Amazing
BORG-WARNER
Engineering
Achievement

Keeps rooms up to 15° cooler by
blocking up to 90% of the sun's rays

All combination screen and
storm windows keep out—

insects in summer
and
cold in winter

but ONLY
Ingersoll 3-Way
Combination Windows also
Shut out Heat!



You pay less than
the cost of Awnings,
Window Screens and
Storm Sash

Light comes in—but heat, glare and insects stay out! When cold weather comes, it's a matter of seconds to replace the KOOLSHADE inserts with light, easy-to-handle, snug-fitting inserts of glass for a winter wonderland of comfort. Result: All year weather protection . . . all-year home comfort. At a cost that's little if any more than ordinary combination windows! Developed by Borg-Warner's Ingersoll Products Division, and available in aluminum or California redwood, this is a striking example of how

B-W Engineering Makes It Work • B-W Production Makes It Available
Attractive distributor-dealer franchises are available in some territories. For details, address Ingersoll Products Division, Borg-Warner Corporation, 321 Plymouth Court, Chicago, Illinois

Almost every American benefits every day from the 185 products made by

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THESE UNITS FORM BORG-WARNER, Executive Offices, Chicago:
BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER SERVICE PARTS
CALUMET STEEL • DETROIT GEAR • DETROIT VAPOR STOVE • FRANKLIN STEEL
INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING • LONG
MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHLEBLER PRODUCTS • MECHANICS
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OVER HALF OF ALL TOP-RATED FIRMS USE *Speed Sweep*

THE BRUSH WITH THE STEEL BACK



M D Sweeps cleaner-faster
Outlasts ordinary brushes 3 to 1!

Write for Styles, Sizes and Prices Today!

MILWAUKEE DUSTLESS BRUSH CO.
538 N. 22 STREET, MILWAUKEE 3, WISCONSIN

Send complete facts about Speed Sweep.

Name _____

Address _____

City _____ Zone _____ State _____

ing upon the run. Porters consider politicians and baseball players the worst tippers, advertising men and journalists, travelling on expense accounts, the best. One southern Senator tips his porters handsomely with checks that invariably bounce. Many porters will not accept tips from newlyweds, considering it unlucky. A good tipper is known in the business as a "nice" man; a nontipper who "walks" the porter is a "snake."

"What would you say if I didn't tip you?" I once asked a porter as I was about to get off a train.

"Why, I wouldn't say anything to you, sir," he answered. "It's what I'd be saying to myself that should worry you."

Contrary to popular belief, Pullman passengers *are* allowed to have pets in their rooms provided the animals are quiet and well behaved. The company put its foot down, however, when it discovered a lady with eleven snarling Pekingese in a six-by-four roomette.

Better Part of Valor

During World War II a porter once notified his conductor that some soldiers had smuggled a special kind of pet—a girl in a fur coat—into their compartment. The conductor charged into the room—and charged right out again. He found that the "girl in a fur coat" was a not-too-happy bear, the company's mascot.

Pullman cars are never left unguarded in transit. When a porter "goes down" for his four hours of sleep, or is at meals, his car is guarded by the porter in the adjoining sleeper. This makes sneak-thievery extremely risky. On the international trains during Prohibition, however, there was a constant battle of wits between customs inspectors and thirsty Americans trying to smuggle in liquor. A favorite trick of passengers was to hide the bottles in pillows and under mattresses. Another rumrunners' dodge on the Central Vermont's "Montrealer" was to tie the bottles outside the windows, haul them in when it was safe. This had to be abandoned when gangs of kids—and adults—ran alongside the train on slow curves and hills, yanked the bottles off the strings.

Before a porter may leave his car at

Could You Handle a \$20,000-a-year Job?

If you think you could, reading this may well help you get one—because today there are *plenty* of these jobs just waiting for the right man.

For some time now business papers have been pointing out that management is having great difficulty finding high-salaried executives. Actually, management is *always* looking for such men—because they are the ones who mean the difference between profit and loss. They command high salaries because they know how to *make money* for their employers. They're worth every dollar they get, and more!

But just what do these executives have that makes them worth so much money? First, it's a point of view. The executive must be able to see the business picture *as a whole*. Then too, he must understand the broad principles of business procedure. He must know the methods and practices that have proven profitable for other companies and be able to apply them to his own business.

Does this seem easy? Frankly it isn't—the way to the top is never easy, but if you are really serious about becoming a \$20,000-a-year, or more, executive, Funk & Wagnalls Company invites you to send for a free booklet by Carl Heyel. This new booklet gives you a complete outline of the famous Heyel Course in which 45 famous business executives describe their working methods and explain, clearly and simply, how you can make use of their combined knowledge and experience to qualify for the great opportunities in modern business.

If interested, write to Funk & Wagnalls Company, Dept. DR-210, 153 East 24th Street, New York 10, N. Y. A penny postcard will do. There is no charge for the booklet.

40,000 Sq. Ft. NEW FACTORY Lease or Sale

1 fl. masonry building, 100% sprinklered, tail gate loading, modern offices, large plot, heavy industrial zone. RR siding possible. 15 min. to Geo. W. Bridge. 20 min. to Lincoln Tunnel. 10 min. to N.J. Turnpike.

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Machines. Our Ten
Million Dollar Tool
Crib is serving industrial plants of all sizes.
Overnight delivery to
All Parts of the U. S.
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the end of a run, or anyone else enter it, he must make a thorough search for articles left behind. Pullman is kept busy uniting people with their false teeth, glass eyes, toupees, wooden legs, watches. A young couple once forgot their baby in the excitement of getting home. They found him in the Pullman office with a "Lost Article" tag around his neck. Porter C. Harrison once picked up a \$120,000 ring off the floor, put it in his pocket until he had finished cleaning. "Didn't think any stone that big could be real," he said.

Don't Drop Your Watch

First thing to do, if you drop anything overboard from a moving train, is to look at your watch. By knowing the time, the conductor can tell where the article should be along the track, send a section gang out to recover it. If you can't find your shoes in the morning, make sure you haven't packed them in your bag. It frequently happens.

Insurance companies reward employees who find insured property; other articles are returned to the finder if unclaimed after 90 days. Pullman Conductor Ed Sneed once got back a crochet needle he had found, tried it out on a piece of string. He became so interested that he has since won prizes for the elaborate tablecloths he has crocheted.

Despite the warm affection in which Pullman has been held by generations of travellers, the company faces a stiff battle to maintain its position. The virtual monopoly in de luxe transportation that it once enjoyed has succumbed



"I'll take the one with the tie—I like the executive type!"

NELWELD CASE HISTORY IN STEEL MILLS



At the rate of 4 to 5 per minute, Nelson studs are end-welded to the back plate of an open-hearth furnace door. Studs support refractory material and also cool it by carrying heat to the water jacket.

Taming Heat—to Boost Production

Facing heat in excess of 3,000° F., steel mill open-hearth furnace doors have a high mortality rate. Door maintenance and replacement costs run high. But far more important is the loss in steel tonnage and tie-up of material handling equipment and maintenance personnel, caused by every door change.

Working together, steel industry, refractory and Nelson engineers came up with an answer to this problem that is increasing door life as much as 1,000 per cent. One mill that formerly required 3,000 door changes per year is now down to less than 275 changes a year.

The answer consists of a pattern of Nelson granular flux-filled studs end-welded to the furnace side of the door, with the spaces between the studs ram-packed with insulating chrome ore. The studs provide proper support for the refractory and help cool it by carrying the intense heat evenly to the water jacket. This adds to the door's operating life . . . increases the time interval between changes . . . increases furnace availability . . . prevents losses in steel tonnage. In addition, material handling equipment and maintenance personnel are released for other operations.

If your manufacturing process involves the use of high heat and refractory materials which need mechanical support, perhaps the versatile Nelweld method can bring similar benefits to you. Discuss your problem now with a Nelson field engineer, or write Dept. D-3, Lorain, O.

Fasten it Better...at Less Cost, with

NELSON STUD WELDING

DIVISION OF GREGORY INDUSTRIES, INC., LORAIN, OHIO

NELWELD SAVES HERE TOO!



Both the efficiency and life of boiler tubes is improved when Nelweld studs are quickly end-welded to the tubes to support refractory linings.

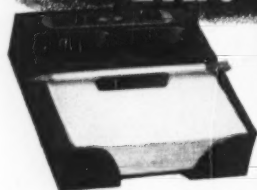
Increased steel tonnage is obtained and fuel consumption is reduced with properly insulated water cooled tubes in slab and billet reheating furnaces. Nelweld studs used to support chrome are quickly and economically installed.

NELWELD

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SILENT SALESMEN THAT SPEAK FOR YOU

The EXECUTIVE Line



The Executive Desk Pad No. 300 Lustrous Walnut Bakelite, with two deep wells, scads of 3x5 memo paper. Blank sample — \$1.50 pstd.

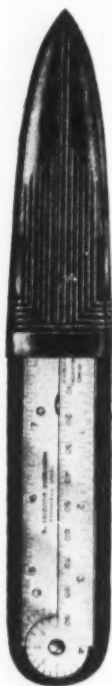
Reminds of You and Your Products Every Hour of the Day

Your firm name, slogan or trademark on an Executive Line Advertising Specialty not only makes a distinctive, practical gift for your customers and business prospects, but builds good will and acts as a constant reminder of your organization.

The Executive Line is distinguished because each and every item is carefully designed to be extra valuable, extra useful and to render a lifetime of use.

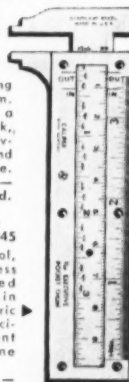
BILL CLIPS • LETTER OPENERS
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NOVEL PAPERWEIGHTS • KNIVES
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PLASTIC FOLDING 6-FOOT RULERS
AND YARDSTICKS • PEN SETS

The EXECUTIVE LINE products are available from most good Advertising Specialty firms or mail coupon TODAY, attached to your letterhead.



Triple Threat Letter Opener No. 1102 Stainless Steel Handle—folding 8" ruler, a mm. measure and a protractor. Back, a decimal equivalent table and reduction scale. Blank sample — \$2.00 postpaid.

Packet Slide Caliper No. 1045 Multiple use tool, 18-8 Stainless Steel Etched calibrations in inches and metric system and decimal equivalent table. Genuine leather case. Blank sample — \$2.00 postpaid.



The Executive Ruler Knife No. 503 All steel—lifetime construction. High temper carbon cutlery with 2 full mirror-polished blades. Water thin, lightweight. Three scales. Blank sample — \$2.00 postpaid.

The EXECUTIVE LINE, 136 W. 54 St., New York 19, N.Y.

Send free catalog and prices. I am enclosing \$ for following blank samples (checked).

No. 300 ☐ No. 1102 ☐ No. 1045 ☐ No. 503 ☐

Name

Firm's Name

Address

City Zone State

DR-482

first to the automobile and more recently to the airplane. Last year, for the first time, more people travelled by plane than by Pullman.

Nevertheless, Pullman officials insist that "the steel wheel on the steel rail is still the most comfortable and safest form of transportation." Where else, they ask, can a passenger travel in such luxurious surroundings, his needs attended to by a courteous manservant, retire to a relaxing bed, and arrive at his destination fresh and rested?

THE END

MANPOWER

Continued from page 13

wage and salary legislation has complicated management's in this area. Wage and salary administration has become so complicated as to be a real burden. Those companies which have already established thorough-going job analysis and wage evaluation programs will find themselves in a much more tenable position when it comes to seeking Government approval of their wage and salary rates and changes.

For several years, in our plant communities we have participated in community wage and subsequently salary surveys among most of the companies with comparable jobs. All the companies who are willing to co-operate exchange information on job content and rates. After the information has been collected, correlated, and summarized, and prepared for distribution to each of the co-operating companies, a meeting is held with representatives from all the companies present and a report is given by a person qualified to explain the results. The information gathered has proved so helpful that in one of the communities where we conducted such surveys, the local Chamber of Commerce has taken over the direction of the surveys as one of its services for member companies.

Recently when we started building a plant in a new community, we conducted a wage survey among already established plants in order to set our

Service award
Programs don't
JUST HAPPEN!

Careful planning and preparation are important components of a successful service award program.

I & R specializes in "setting-up" service award programs tailored to individual requirements. Suggests types of awards to select, time and methods of awarding and numerous other aids to insure a successful smooth-operating program.

We would appreciate the opportunity to help make your program a success.

IRONS & RUSSELL COMPANY
Emblem Manufacturers Since 1861
95 Chestnut Street, Providence 3, R. I.

IT'S GOOD BUSINESS to Save Money!

Why not check your handling methods! Chances are you can effect important savings in this operation. The SPEEDWAYS man can show you how a low cost SPEEDWAYS conveyor system saves many man-hours and speeds production. Call your nearest SPEEDWAYS distributor . . . or write us.

Efficient, easy-to-handle

SPEEDWAYS CONVEYORS

move more with fewer men at lower costs

THERE IS A SPEEDWAYS CONVEYOR TO SUIT YOUR HANDLING NEEDS

- SPEEDWAYS Gravity Wheel Conveyors
- SPEEDWAYS Gravity Roller Conveyors
- SPEEDLIFT Portable Power Belt Boosters
- SPEEDBELT Assembly Conveyors



SPEEDWAYS Conveyors, Inc.
1309 Niagara St., Buffalo 13, N. Y.
Also Mfd. in Canada, Union of So. Africa

rates in lines with those competing in the same labor market. We believe that this undertaking is not only a sound investment in better employee and community relations, but we know that it was of great assistance to us in seeking government approval of the wage schedule for the new plant.

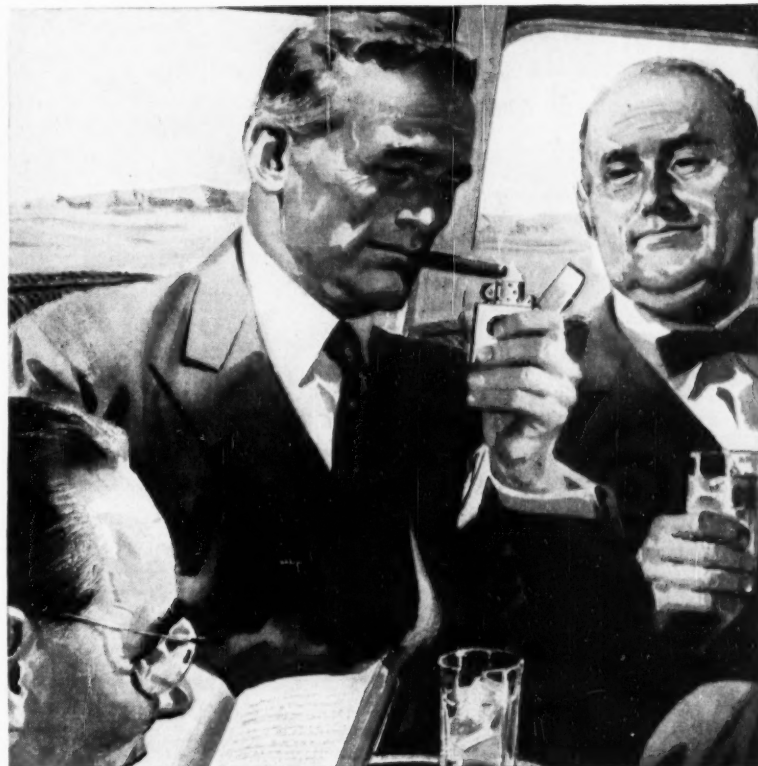
Our sixth policy covers an important factor in continued high production so vitally needed in a defense economy—"During an emergency, many of us may work long hours or under unusual pressure. It will be the responsibility of each supervisor to see to it that the health of his people is not impaired by excessive demands of their jobs, and that employees take proper vacations. Medical department programs will be planned to deal with the requirements of an extended work force and to handle emergency situations. We will continue to maintain safe and healthful working conditions and train employees in understanding and guarding personal safety."

Civil Defense

Seven: "We will co-operate fully with civilian defense activities. Employees will be encouraged to take part in this effort. For example, the company will allow employees time off with pay to contribute to blood banks."

Eight: "Information will be released to employees and to the public on company activities which reflect accurately the performance of our company as an industrial citizen. We will endeavor to give employees information by which they can readily recognize the importance of their jobs and the relationship of their work to the war effort. We will give the community information so it, too, will have the facts about the company's activities and can judge its performance fairly. At all times, of course, information made public will conform to military security requirements."

In a period of emergency, the need for information becomes greater in order to offset rumors and counter propaganda, while the means of satisfying that need may become more restricted by regulations and secrecy. The management that expects to receive the greatest co-operation will not be stymied by the difficulties of the job, but will exert all effort toward doing

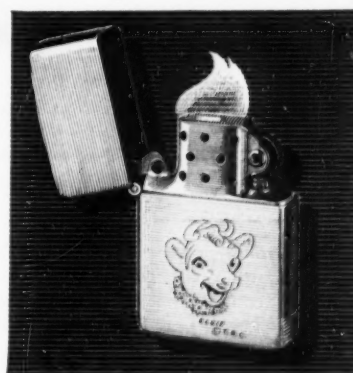


Be there... with Zippo!

Here's how to keep a man mindful of you and your company—*wherever he goes*. Give him a ZIPPO—engraved with your company trade-mark. For ZIPPO is the lighter men carry and use for years. That's because it's the *one* lighter that always lights with a zip—even in wind or rain. Yes, you too, can *be there with ZIPPO*—keeping goodwill glowing for years. Send the coupon and see how little it costs!

ZIPPO

The One-Zip
Windproof Lighter



Ideal for sales incentives, length of service awards, sales promotion premiums, business anniversary gifts.

FREE mechanical service—for life!

**GET YOUR COPY
OF FREE BROCHURE!**

Zippo Manufacturing Company
Bradford, Pa. Dept. DR-23

Please send FREE brochure showing Zippo models, quantity discount prices, and information on low-cost trade-mark engraving.

Company.....

Address.....

City.....Zone.....State....

Att'n:.....Title.....

The FIRST Flying Carpet

was "FLOATED" by an Old Caliph in Bagdad



He mentioned it frequently in his famous Tales of the "Thousand and One Nights." Since then "air space" has been put into use for many mechanical devices . . .

Not a floating carpet — but a powerful "work-horse" for conveyor systems is the

FLOATING DRIVE with AUTOMATIC CUT-OFF and LOAD INDICATOR



another FIRST by
JERVIS B. WEBB COMPANY

For years a standard on Webb Conveyor systems, the patented Floating Caterpillar Drive enables automatic limit switch cut-off in case of jam, cushions starting load, and has an easily calibrated load indicator.

The motivating power unit on both the Caterpillar and Sprocket type Webb drives floats on wheels against heavy springs. When a conveyor starts, the initial shock is taken by these springs.

If external forces jam the conveyor, the springs are compressed to a point where the moving frame actuates a limit switch on the fixed frame, stopping the drive instantaneously. As soon as the jam is eliminated, the conveyor may be started immediately by push button. There are no shear pin headaches. If a conveyor becomes overloaded, this fact is indicated at once as the compressor springs move an arrow indicator to a red danger area.



an even better job of employee and community communications.

"The best employee is an informed employee" is a true statement at any time. For the most part an employee working on a defense project will recognize that certain information cannot be publicized for security reasons, but if he feels that he is receiving as much information as can be released, he will be more inclined to join with management in helping to protect that which should not be made public.

Security Rules Upheld

Nine: "In complying with plant security procedures every effort will be made to avoid any unfounded suspicion regarding any individual. All employees will be expected to obey necessary regulations, such as showing badges. In the enforcement of these measures, courtesy and consideration will be observed by plant guards."

Ten: "We will comply fully with the spirit and intent of the Selective Service laws. The personnel department will have full responsibility for dealing with Selective Service and related agencies regarding induction of personnel into military service. The company



ANDERSON PHOTOGRAPH FROM DEVANEY

will request deferments for individuals strictly in conformance with standards established by Selective Service. We will avoid action which might be interpreted as applying any pressure on employees to enlist or not to enlist in military service.

Eleven: "We will allow time off with pay for employees required to report for military examinations during working hours. During a national military emergency or war, a separation payment will be made to all employees who enter the U. S. Armed Forces. At the time of leaving for military service, the employee will receive pay for any earned and unused vacation time. The veteran's length of service in the armed

For faster . . .
easier . . . better
tacking . . .



DUO-FAST One Hand Automatic Tackers



You'll like Duo-Fast Tackers. They do a good job. They are easy to use. They save you time.

There are 80 fully guaranteed models. There is one to speed and simplify your job. Investigate now.

FREE Send for Duo-Fast Catalog and Profitable Suggestions



FASTENER CORP.
860 FLETCHER ST., CHICAGO 14, ILL.

HOW TO CUT PENCIL COSTS IN HALF



Why don't you save the kind of money hundreds of leading firms the country over are saving, using "Autopoint" Pencils for organization use? Many cut pencil costs IN HALF . . . and get a bonus of pencil sharpening time saved, greater efficiency, and the trouble-free writing delivered by these famous pencils with "Grip-Tite" Tips that won't let leads wobble, turn or fall out.

FREE BOOKLET

Send for free booklet showing full line of "Autopoint" Pencils with low quantity prices. Pencils illustrated, are but two of the many popular, money-saving "Autopoint" numbers offered for organization use. Send coupon.



"Autopoint" is a trademark of Autopoint Co., Chicago.

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Send me Free Booklet giving quantity prices on "Autopoint" Better Pencils for Organization use.
☐ Check here to have representative call.
Name _____
Company _____
Position _____
Street Address _____
City _____ Zone _____ State _____

forces shall be considered part of his employment record in figuring his eligibility for joining company benefit programs."

Twelve: "Employees entering military service will, of course, retain all reemployment rights provided in the Selective Service laws. In addition, we will endeavor to place a returned veteran in the position to which he would have advanced if he had remained in the company and for which his skills qualify him. We will make every reasonable effort to reemploy all veterans who have worked with us, whether they have reemployment rights or not. We will endeavor to maintain contact with employees in military service so they will want to come back. We especially invite employees in service to visit the plant when home on leave."

To Shed More Light

The manpower policies booklet was mailed to each employee at his home so that he might have the opportunity to study it at his leisure and to discuss it with members of his family and his friends. Early this year we plan to mail the booklet with a special covering letter to all stockholders of the company so that they may become aware of some of the special personnel problems which their management must meet during a period of defense production.

We do not claim to have answered all the problems which may arise. We do feel that we have made a start toward avoiding many problems which might arise had no thought been given to the matter until such time as we were forced to by a national emergency or government direction.

THE END



"Whom shall I say is calling?"



LINE-A-TIME

to complete
the picture of
an efficient
typing station

Let's say your typist is fast and accurate, her typewriter is the best, her desk is functionally ideal. Still you need one vital element to complete the picture of efficiency... the Remington Rand Line-a-time copyholder!

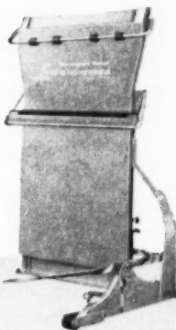
Typing Production Goes Up... COSTS GO DOWN with Line-a-time, because Line-a-time means natural, "right before your eyes" reading... faster, easier, more accurate transcribing of all kinds of copy. Just look at all of these time and money-saving features—

Exclusive Trans-vue Line Guide—underscores copy line... permits full view of next several lines to spot penciled-in changes and warn of the end of the page.

New Space-selector—for instantaneous choice of spacing.

Exclusive Turn-a-page Pocket—easy page turning... secure page holding.

Eye-Easy Light-Conditioning—angles copy to give you maximum lighting and maximum readability.



Add your office to the fast-growing list of those getting *more production at lower cost*—with Line-a-time, the world's finest copyholder!

**FREE LINE-A-TIME BROCHURE—
YOURS FOR THE ASKING!**

Remington Rand

Room 2011, 315 Fourth Avenue, New York 10, N. Y.

- ☐ Please arrange for a demonstration of the New Line-a-time in my office—no obligation, of course.
- ☐ Please send me folder RSL 212 on the New Line-a-time copyholder for faster, easier, more accurate typing.

Name _____

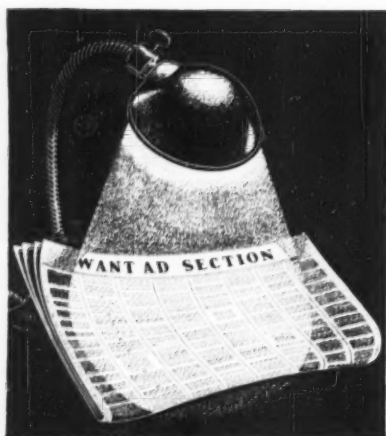
Firm _____

Address _____

City _____

Zone _____

State _____



*If this reminds you
of your office
it's time you saw
the dealer who features*

STEELCASE

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Business Equipment

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METAL OFFICE FURNITURE COMPANY
GRAND RAPIDS, MICHIGAN

OPPORTUNITIES

Continued from page 20

were notable quantitative increases over 1950; about 10 per cent in nickel and asbestos; 60 per cent in cobalt; 30 per cent in iron ore; 20 per cent in sulfur (in the form of pyrites); and 7 per cent in zinc. While the output of petroleum practically doubled to almost 50 million barrels, that of molybdenite was more than tripled, and that of titanium oxide (a new Canadian product) was nearly 50 times greater.

These are of course important gains, in most cases of the most essential strategic materials and, in respect with nickel and asbestos, from fields which already are the world's major sources of supply. Yet these gains are dwarfed by those projected by 1955 (see the last column of Table II) such as that of 430 per cent in iron ore; an even bigger rate of increase in titanium; of 210 per cent in petroleum; of 95 per cent in cobalt; and of 45 per cent in primary aluminum. No such ambitious increases can, under foreseeable conditions, be expected elsewhere.

As mention has been made of hastening the work on these projects, it might be noted that that on the vast and high-grade iron deposits in the Quebec-Labrador region is being pressed with a view to bringing them into partial production in 1954, a year ahead of the original schedule. Yet there is considerable geologically favorable territory in this area still to be explored and if, as is expected, additional deposits are found, the development program there may extend for many years beyond 1955.

This new iron field is, however, not the only one undergoing development in Canada. The Steep Rock property of the Lake Superior district in Ontario, which has been in operation for some years, is regarded by competent authorities, including a leading American business man connected with the iron and steel industry, as having indications of 500 million tons of high-grade iron ore. If these indications are realized the property will be the biggest single concentration of such material ever known. A large expansion program in this field is well under way and should have its effect in

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noticeably higher production in 1953.

Iron mining has been carried on for many years in the Algoma district, back of Sault Ste. Marie, Ontario, with ore of low and medium grade from known deposits of several hundred million tons, much of which require beneficiation. This field is also the scene of extensive exploration, development, and metallurgical research, and has the prospect of a substantial increase in its output.

The Wabana field in Newfoundland, also in operation for many years, is one of Canada's largest sources of high grade iron, and its operations are being modernized with a view to greater productivity. In British Columbia an old property has been reopened from which iron is being shipped to Japan. A short distance above the southern end of Lake Ontario work has been started to open up what is believed to be a large ore body of fair grade.

Ore and Oil

Taking all these iron projects into account, they represent the most far-flung and probably the most promising in any country to-day. In all, too, they should make it possible for Canada to double her present iron ore production by 1954, reach her objective of 19 million tons a year later, and then go on to an annual output of at least 30 million tons during the following decade.

The oil development program in western Canada—centered in Alberta, but recently extending to Saskatchewan, Manitoba, and northern British Columbia—has involved a total capital expenditure of about \$750 million in the past five years. The results are that about 2,500 wet wells have been drilled, which have a productive capacity of more than 200,000 barrels a day, from established reserves of at least 1.5 billion barrels. Higher production from these reserves waits upon additional pipeline and refining facilities which are now being constructed.

But the results so far seem only of a first stage character, for most of the nearly 600,000 square miles of prospective oil bearing territory (more than double that of Texas) has yet to be thoroughly exploited in one way or another. While all this vast oil bearing

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"Leco-S3 costs us about \$600 a year. Formerly, we paid \$1,200 to \$1,300 yearly for wax. Maintenance time has been reduced by 45%, since an application of Leco-S3 lasts considerably longer than wax and requires less time to lay on the floor."

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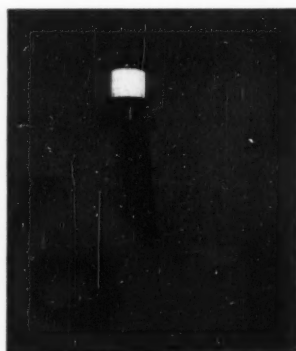
City _____ Zone _____ State _____

area is being developed over the next two or three decades, oil production will rise far above the present level, perhaps so far as to provide for all of Canadian requirements west of the Province of Quebec, and for a good part of the needs of the Pacific Coast.

Natural Gas, Minerals

Complementary to this oil development program is, of course, one of natural gas. The proven reserves of this element are 10 to 12 trillion cubic feet, sufficient to provide for all of western Canada's requirements and to leave a substantial exporting surplus, both east and west, and extending, if market and tariff conditions permit, to some western States. The most ambitious of several plans to pipe the gas is that for the construction of a line of more than 2,000 miles' length from Alberta to Montreal and Toronto.

The iron, oil, and natural gas projects, though the most dramatic and, from Canada's point of view, the most beneficial to her own economy, do not overshadow other mineral developments. In the Gaspé section of the Province of Quebec there appears to be a large concentration of medium grade copper which is to be opened up during the next few years, with a probable output of 5,000 tons of ore a day. In north-



POLE PHOTOGRAPH FROM DEWANEY

western Quebec, some 300 miles north of Montreal, promising copper, lead, and zinc properties are in the initial stages of development.

A new nickel mine is also under development in northern Manitoba, this work involving the construction of a railway line of nearly 150 miles. The property is expected to come into production within the next two years, in which period a refinery, nearly 900 miles



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distant and in close proximity to Edmonton, Alberta, is to be constructed, not only to process the mine's nickel ores and to provide 17 million pounds of this metal annually, but also to produce several hundred thousand pounds per year of cobalt and chemicals.

Still farther west, in a remote region of British Columbia, huge new aluminum facilities are to be constructed, including a smelter with an initial output of over 80,000 metric tons a year, while a new plant of the same kind in the Saguenay district of Quebec will add another 45,000 tons to Canada's production of primary aluminum, already about half of the total world supply. Eventually, this Canadian production may be increased by at least 400,000 tons, practically double the present capacity.

In the Mayo-Keno region of the Yukon, not far from the once famous Klondike gold diggings, a lead-zinc property is being opened up which some good mining authorities believe will be the largest producer of its kind in Canada, if not in the world.

Uranium and Power

None of the projects mentioned takes into account improvements on the established uranium property at Great Bear Lake in the sub-Arctic, or work on newly-found deposits of this highly strategic material in northern Saskatchewan. Little can be said about these because of security reasons.

Moreover, the vast and varied natural resources development program does not yet include the deepening of the St. Lawrence waterway system, or the installation of new hydro-electric generating systems along this route. As is probably well known, Canada has determined that she will go ahead with these projects, whether or not her treaty with the United States regarding them is ratified by the American Congress. But provided, of course, that approval for them is not withheld by the American-Canadian commission which has jurisdiction over the international sections of the St. Lawrence River.

The natural resources development program already under way does include, however, many smaller projects which cannot be specifically described because of space limitations. Individually, they appear small in proportion to

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Our Pension Trust Division has acquired a unique experience in developing all types of pension systems for a great number of trades and businesses. This experience can be invaluable in working out a pension plan to fit the income and employee benefit requirements of your company. We shall be glad to discuss with you any pension problem you may have, including pension costs. No obligation whatever.

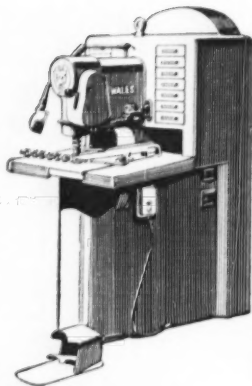
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MAN
MUST
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A radio chassis, 10" x 14", with 27 holes and 4 notches was produced including setup in only 9.3 minutes and subsequent pieces in only **1.8 min.**

An automotive channel, 28" long with 12 holes was fabricated including setup in only 3.37 minutes and subsequent pieces in only **29 sec.**

An electric refrigerator part, 29 1/2" x 8 1/2" with 10 holes and 4 notches was fabricated including setup in only 5.61 minutes and subsequent pieces in only **37 sec.**

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A part for farm equipment, 72 1/2" x 22", with 32 holes and 26" nibbled cut-out was finished including setup in only 12.01 minutes, subsequent pieces in only **2.32 min.**

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the major developments, but collectively their production will, in the aggregate, be quite important. For example, a number of old lead-zinc mines have been re-opened in British Columbia and some new deposits uncovered, for all of which twelve new base metal mills are being built and \$35 million spent to enlarge the world's biggest lead-zinc smelter and refinery.

Americans Needed

The entire program in its present definite form will require a total working force of about 100,000 people, including managers, engineers, and service personnel. It will be a problem for Canada to furnish the skilled labor and professional staff and there may be fine opportunities in this field for Americans of the right qualifications. In any event, much of the new capital required for the major projects will be sought and, if past experience is any guide, obtained in the United States.

Associated with this natural resources development program is one of new metallurgical, chemical, and other industrial facilities. Canada, as already noted, has a large industrial system, which was expanded greatly during and since the last World War.

Yet this great expansion will have to be continued hand in hand with the opening up of new sources of raw materials; indeed, as a result of the resources development. Thus several new large metallurgical and chemical industries are to be constructed in Alberta and British Columbia, not only to increase base metal production, but also to turn much more wood pulp into synthetic textiles, and to use by-products of the western oil and gas industries.

The new industrial facilities for these purposes alone will require many millions in new capital, as well as many thousands of new workers. Again Canada will rely upon the United States for much of the required new capital, as well as American "know how." In addition, much of the relative machinery and other equipment will be of American make. In all, therefore, the vast natural resources development program across Canada and the associated industrial expansion will really be joint North American enterprises.

THE END

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- Render professional services.

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MILLAR, MACDONALD & CO., Chartered Accountants, Winnipeg, Man. and 350 Bay St., Toronto, Ont.
THORNE, MULHOLLAND, HOWSON & McPHERSON, Toronto, Kitchener and Galt, Ontario.

Customs House Brokers, Etc.

BLAIKLOCK BROS., LIMITED, 307 Common St., Montreal. Est. 1876. Customs-Brokers & Forwarders.
SEABOARD BROKERS, Halifax, N. S. Shipping consultants, forwarders, distributors by Air, Land & Sea.
THOMPSON-AHERN & CO., 40 Yonge St., Toronto, Ont. Customs House Brokers & Forwarders. Est. 1912.

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W. H. ESCOTT CO., LTD., 129 McDermott Ave., Winnipeg, Man. Groceries, hardware, drugs, etc. Cover all Canada.

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FASKEN, ROBERTSON, AITCHISON, PICKUP & CALVIN, Barristers, etc., 36 Toronto St., Toronto 1.
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MacKELVIES LIMITED, Winnipeg. Seek agencies grocery, drug, light hardware, novelty, toy lines Covering Western Canada.
PRODUCTS BROKERAGE CO., 198 Osborne, Winnipeg. Interested in general merchandise lines; all Canada.
W. CLAIRE SHAW CO., 407 McGill St., Montreal. Seek dir. agcies from mfrs. hdwe. auto & hhold tools.
WILSON AGENCIES, Hamilton, Ont. Specializing in sales of hardware and electrical lines.

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HEALTH

Continued from page 18

ply with pertinent suggestions as to how he can better his physical status. When this association has been consummated, the doctor has made a friend and the applicant has had his first contact with an executive of the company who is primarily interested in his personal well-being.

The doctor may not see the employee again for two or three years, depending upon the doctor's own decision.

The employee should not be encouraged to see the doctor and insist upon a yearly checkup unless the doctor specifically recommends it. Between periodic inventories, the employee is encouraged to visit the medical department only when he is ill or in trouble.



DEVANEY PHOTOGRAPH

During the first ten years of employment a complete medical inventory of an individual can be made including:

1. Occupational history. The stresses and strains, if any, that he has undergone; his working environment, promotions, attitudes, desires, frustration. All may have a future effect upon his physical and mental well-being.

2. Pattern of his home life and extracurricular activities. These are important factors so often overlooked in planning the future of to-morrow's executive.

3. Complete physical inventory. This should include all the laboratory procedures needed to evaluate the person's physical makeup and to record his awareness of importance of health maintenance.

All discussions between the doctor and employee, as well as the records, are extremely confidential. Under no circumstances should the doctor divulge the findings to management. An employee cannot be expected to disclose all the intimate details of his

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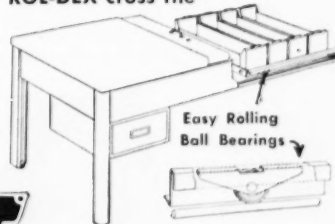
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medical and occupational difficulties (and possible domestic difficulties) unless he is positive that his confidence will be respected. On the other hand, without these facts, the doctor would be unable to make considered and constructive recommendations.

Knowing One's Scope

The employee must be scientifically schooled in regard to his own capacities and limitations. He is at liberty, of course, to discuss his personal problems with someone he chooses himself, without external pressure.

A true executive, for economic and efficiency reasons, if he wishes to inspire confidence and loyalty in his associates, must respect and give just consideration to their personal wishes.

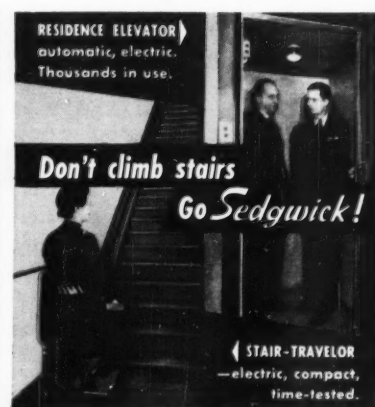
I firmly believe that certain individuals who have limitations they understand and who are willing to live within them make excellent executive material. They are, perhaps, better than many who have no known limitations, but who take on extracurricular activities that may have a deleterious effect upon their physical and mental well-being.

Inevitably the scope of the doctor in industry in the future will be more educational and less curative. More and more will he deal with the normal physiology and psychology of the employee, less and less with his aches and pains. The primary effort will be to keep the fit fit rather than trying to make the unfit fit.

Management is daily becoming more alert to the necessity of this. The company doctor is in the very midst of all that is happening to the various groups within a given organization. He sees and understands the needs of employees of all ranks. He has a natural inclination to help.

When he can maintain the well-established, confidential rôle of doctor-patient relationship, his accomplishments in the field of health and executive development will be of major importance.

There are many examples of the fact that a little effort to improve the conditions under which men work can lead not only to greater immediate efficiency, but also to better health. As very few able executives live long enough to enjoy the reminiscence of their past ac-



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More Protection for More People

Report to Metropolitan Policyholders for 1951

THE importance of Life insurance and its relationship to the lives of the people of the United States and Canada cannot effectively be portrayed by figures in a balance sheet. Cold figures can never adequately show human needs and their fulfillment. It is important, therefore, to try to interpret these figures in terms of the millions of people they represent and the millions who benefit by the use of the services rendered by the Company and its Agents. The Metropolitan was serving 33,373,000 Life insurance policyholders at the close of the year.

The personal phases of Life insurance—for it is a highly personal business—are highlighted daily by dramatic instances. Sometimes they are so unusual as to give special emphasis to the part our business plays in the life of the United States and Canada. The following quotation from a letter from the son of a deceased policyholder, requesting the return of a policy on which claim had been paid, tells with simple sincerity a moving story of a Life insurance policy, of the son's relationship with his father, and of a sound process of economic and social education:

"This policy . . . has for me possibly a greater sentimental value than it would have cash value . . . For you to understand this, you would have to know the years of close relationship and confidence that existed between my father and me. When I was a small boy, he would take me with him to his safety deposit vault . . . Always he stressed to me the importance of his insurance policy, how this piece of paper would some day have a cash value that might tide the family over in an emergency . . . Time has passed . . . but the sentimental worth of this piece of paper is constant in my thinking . . . I have always been told that business, especially Big Business, is hard and cold and rigid, but I know that this is not so, because business is made up of people. People with hearts and souls and loved ones, and people who have lost loved ones, and some who possibly think and feel the same way that I do."

We were, of course, pleased to grant this unusual request.

The record sum of \$924,000,000 was paid in benefits to policyholders and beneficiaries during

1951. This included payments of \$141,000,000 on more than 1,250,000 claims (five times ten years ago) for Accident and Health and Disability benefits. A new high was also reached in Life insurance in force—\$48,512,000,000, a gain of more than \$3,000,000,000 over 1950.

More people than ever were protected last year by Metropolitan Accident and Health insurance. As the year closed, the Company had in force 3,270,000 policies or certificates providing weekly indemnity for disability of \$86,000,000 per week. Hospital, Surgical or Medical Expense benefits were provided by 2,744,000 policies or certificates.

Another significant development during the year was the introduction of Extended Medical Coverage through Group insurance to protect people against abnormal hospital, surgical, and medical expense that might exhaust a family's entire savings.



CHARLES G. TAYLOR, JR.
President

METROPOLITAN ASSETS AND OBLIGATIONS—DECEMBER 31, 1951

(In accordance with the Annual Statement filed with the Insurance Department of the State of New York.)

ASSETS WHICH ASSURE FULFILLMENT OF OBLIGATIONS		
Bonds		\$7,692,216,940.58
U. S. Government	\$2,289,608,948.99	
Canadian Government	174,292,067.10	
Provincial and Municipal	67,686,151.19	
Railroad	600,924,947.28	
Public Utility	1,426,156,349.76	
Industrial and Miscellaneous	3,012,453,404.33	
Bonds of the Company's housing development corporations	121,095,071.93	
Stocks		169,090,896.67
All but \$16,499,331.67 are preferred or guaranteed.		
Mortgage Loans on Real Estate		1,890,959,998.40
On urban properties	\$1,745,033,573.75	
On farms	145,926,424.65	
Real Estate (after decrease by adjustment of \$16,400,000.00 in the aggregate)		299,649,990.00
Housing projects and other real estate acquired for investment	\$265,200,536.96	
Properties for Company use	45,070,016.26	
Acquired in satisfaction of mortgage indebtedness (of which \$3,184,671.89 is under contract of sale)	5,779,436.78	
Loans on Policies		447,060,539.27
Made to policyholders on the security of their policies.		
Cash and Bank Deposits		162,302,812.57
Premiums, Deferred and in Course of Collection		149,471,380.68
Accrued Interest, Rents, etc.		90,153,625.90
TOTAL ASSETS TO MEET OBLIGATIONS		\$10,900,906,184.07

OBLIGATIONS TO POLICYHOLDERS, BENEFICIARIES, AND OTHERS

Statutory Policy Reserves	\$9,284,635,384.00
This amount, which is determined in accordance with legal requirements, together with future premiums and reserve interest, is necessary to assure payment of all future policy benefits.	
Policy Proceeds and Dividends Left with Company	615,163,380.00
Policy proceeds from death claims, matured endowments, and other payments, and dividends left with the Company by beneficiaries and policyholders to be paid to them in future years.	
Reserved for Dividends to Policyholders	170,404,842.55
Set aside for payment in 1952 to those policyholders eligible to receive them.	
Policy Claims Currently Outstanding	48,734,247.68
Claims in process of settlement, and estimated claims that have occurred but have not yet been reported to the Company.	
Other Policy Obligations	71,057,118.70
Including premiums received in advance and special reserves for mortality and morbidity fluctuations.	
Taxes Accrued (Payable in 1952)	43,269,538.00
Contingency Reserve for Mortgage Loans	9,000,000.00
All Other Obligations	25,805,419.38
TOTAL OBLIGATIONS	\$10,268,069,930.31
SURPLUS FUNDS	
Special Surplus Funds	\$103,883,000.00
Unassigned Funds (Surplus)	528,953,253.76
TOTAL SURPLUS FUNDS	632,836,253.76
TOTAL OBLIGATIONS AND SURPLUS FUNDS	\$10,900,906,184.07

NOTE—Assets amounting to \$513,921,526.32 are deposited with various public officials under the requirements of law or regulatory authority. In the Annual Statement filed with the Massachusetts Insurance Department, "Statutory Policy Reserves" are \$9,284,703,206.00, and "All Other Obligations" are \$25,737,597.38.

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(A MUTUAL COMPANY)



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complishments, a constructive industrial health program becomes a personal as well as a corporate problem of growing magnitude in to-day's business affairs.

I subscribe to the theory that the health problems of to-morrow's executive are not complex. That is assuming, of course, that the executive of to-day acknowledges the over-all problem and is willing to do something constructive about it.

THE END

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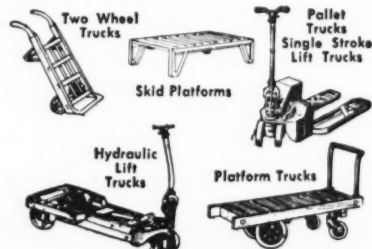
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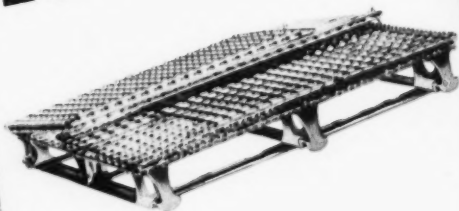
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